

10/05/21
110 Old Market St.
St Martinville, LA 70582

Report #1
TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

0.0°0' TVD

Operator MAGNOLIA OIL & GAS							Contractor PATTERSON			County / Parish / Block WASHINGTON			Engineer Start Date 10/04/21		24 hr fig. 0 ft		Drilled Depth 0 ft																																								
Well Name and No. BIGHORN PLAINS H02 BH							Rig Name and No. 248			State TEXAS			Spud Date 10/06/21		Current ROP 0 ft/hr		Activity Rig Up																																								
Report for Kevin Burt/Chris Mayeux							Report for Tool Pusher			Field / OCS-G # GIDDINGS			Fluid Type WBM		Circulating Rate 0 gpm		Circulating Pressure psi																																								
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																																									
Weight 8.4-9.6		PV 0-10		YP 0-10		GELS <5 <10		pH 8.4-9		API fl <25		% Solids 2-10		In Pits 0 bbl		Liner Size 5.25		Liner Size 5.25		Liner Size																																					
						10/5/21								In Hole 0 bbl		Stroke 12		Stroke 12		Stroke																																					
														Active 0 bbl		bbl/stk 0.0763		bbl/stk 0.0763		bbl/stk 0.0000																																					
														Storage <u>2594 bbl</u>		stk/min		stk/min		stk/min																																					
														Tot. on Location 2594 bbl		gal/min 0		gal/min 0		gal/min 0																																					
Flowline Temperature °F							PHHP = 0							CIRCULATION DATA n = 0.000 K = 510.000																																											
Depth (ft)														Washout = 5%			Pump Efficiency = 95%																																								
Mud Weight (ppg)							8.4						Drill String Disp.		Volume to Bit 0.0 bbl		Strokes To Bit			Time To Bit																																					
Funnel Vis (sec/qt)							@ 90 °F		24						Bottoms Up Vol. 0.0 bbl		BottomsUp Stks			BottomsUp Time																																					
600 rpm							1						0.0 bbl		Riser Ann. Vol. 0.0 bbl		Riser Strokes			Riser Circ. Time																																					
300 rpm							1						DRILLING ASSEMBLY DATA							SOLIDS CONTROL																																					
200 rpm							1						Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours																																							
100 rpm							1						Drill Pipe 5.000 4.276 0' 0'					Shaker 1 140																																							
6 rpm							1						Hevi Wt 5.500 3.000 0'					Shaker 2 140																																							
3 rpm							1						Dir. BHA 8.000 2.875 0'					Shaker 3 140																																							
Plastic Viscosity (cp)							@ 120 °F											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 108'					Prev. Total on Location 0.0																																							
HTHP Filtrate / Cake Thickness							@ 0 °F						Int. Csg. 108'					Transferred In(+)/Out(-) 2594.0																																							
Retort Solids Content							0.4%						Washout 1					Oil Added (+) 0.0																																							
Retort Oil Content													Washout 2					Barite Added (+) 0.0																																							
Retort Water Content							99.6%						Open Hole Size 0.000 0'					Other Product Usage (+) 0.0																																							
Sand Content							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							8.2											Left on Cuttings (-) 0.0																																							
Alkalinity, Mud Pm																		Sand Trap Discharge																																							
Alkalinities, Filtrate Pf/Mf																		Est. Total on Location 2594.0																																							
Chlorides (mg/L)							420											Est. Losses/Gains (-)/(+) 0.0																																							
Calcium (ppm)							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																																														
Percent Low Gravity Solids							0.4%																																																		
Percent Drill Solids							0.4%																																																		
PPA Spurt / Total (ml) @							@ 0 °F						BIT DATA			Manuf./Type																																									
Estimated Total LCM in System							ppb						Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure																																
Sample Taken By							C. Beasley				P.Blair																																														
Remarks/Recommendations: OBM RECEIVED: 1183 F/RedwoodB1H 1411 F/Mudplant Pretreat Active: 8 sx SAPP and Detergent. Sweep: 2 sx SAPP 10 gallons detergent Spud load inventory will be added on daylight report.										Rig Activity: Rig was moved from Redwood B1H to the Bighorn pad. Bulk tanks set up with 2 loads of bulk barite ordered for the morning. Diesel tanks set and 1 filled with 7200 gallons of diesel. All Frac tanks plumbed and ready to go. Chemicals transferred over and a spud load has arrived. While the rig is rigging up pits are being filled with FW. Screens dressed with 140 screens.																																															
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.																		\$4,080.00				\$4,080.00																									
										INCLUDING 3RD PARTY CHARGES																		\$4,080.00				\$4,080.00																									

THIRD PARTY COST SHEET

[illegible]

OUTSOURCE FLUID SOLUTIONS LLC.

FLUID
VOLUME
ACCOUNTING

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

Grand Totals	Date	WEEK 1							WEEK 2							WEEK 3						
		10/5/21	10/6/21	10/7/21	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
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
	Bit Size	13 1/2																				
	Starting Depth	-	-																			
	Ending Depth	-																				
-	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Starting System Volume	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594
-	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																					
2,594	Ending System Volume	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594
-	Mud Recovered																					
		Comments:							Comments:							Comments:						
		10/5/21							10/12/21							10/19/21						
		10/6/21							10/13/21							10/20/21						
		10/7/21							10/14/21							10/21/21						
		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						

2,594

10/06/21

110 Old Market St.
St Martinville, LA 70582

Report #2

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

0.0°

0' TVD

Operator MAGNOLIA OIL & GAS							Contractor PATTERSON			County / Parish / Block WASHINGTON			Engineer Start Date 10/04/21		24 hr fig. 0 ft		Drilled Depth 0 ft																								
Well Name and No. BIGHORN PLAINS H02 BH							Rig Name and No. 248			State TEXAS			Spud Date 10/06/21		Current ROP 0 ft/hr		Activity P/U BHA																								
Report for Kevin Burt/Chris Mayeux							Report for Tool Pusher			Field / OCS-G # GIDDINGS			Fluid Type WBM		Circulating Rate 0 gpm		Circulating Pressure psi																								
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																									
Weight 8.4-9.6		PV 0-10		YP 0-10		GELS <5 <10		pH 8.4-9		API fl <25		% Solids 2-10		In Pits 520 bbl In Hole -10 bbl Active 517 bbl Storage <u>2594 bbl</u> Tot. on Location 3104 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																					
Time Sample Taken							10/6/21				10/5/21																														
Sample Location							storage				no fluid																														
Flowline Temperature °F													PHHP = 0 CIRCULATION DATA n = 0.000 K = 510.000																												
Depth (ft)													Bit Depth = '			Washout = 0%			Pump Efficiency = 95%																						
Mud Weight (ppg)							8.4						Drill String Disp.		Volume to Bit 0.0 bbl Bottoms Up Vol. -2.6 bbl Riser Ann. Vol. -2.6 bbl		Strokes To Bit BottomsUp Stks Riser Strokes			Time To Bit BottomsUp Time Riser Circ. Time																					
600 rpm							1						9.8 bbl																												
300 rpm							1						DRILLING ASSEMBLY DATA						SOLIDS CONTROL																						
200 rpm							1						Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours																							
100 rpm							1						Drill Pipe 5.000 4.276 -453' 0'					Shaker 1 140																							
6 rpm							1						Hevi Wt 5.000 3.800 330' -453'					Shaker 2 140																							
3 rpm							1						Other Pipe 7.875 3.250 85' -123'					Shaker 3 140																							
Plastic Viscosity (cp) @ 120 °F													Dir. BHA 8.000 2.000 38' -38'					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 108'					Prev. Total on Location 2594.0																							
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 108'					Transferred In(+)/Out(-)																							
Retort Solids Content							0.4%						Washout 1					Oil Added (+) #VALUE!																							
Retort Oil Content													Washout 2					Barite Added (+) 0.0																							
Retort Water Content							99.6%						Open Hole Size 0.000 0'					Other Product Usage (+) 0.8																							
Sand Content							0%						ANNULAR GEOMETRY & RHEOLOGY						Water Added (+) 517.0																						
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							6.2						0x5 108' 0.0 8.40					Sand Trap Discharge																							
Alkalinity, Mud Pm																		Est. Total on Location #VALUE!																							
Alkalinities, Filtrate Pf/Mf																		Est. Losses/Gains (-)/(+) #VALUE!																							
Chlorides (mg/L)							460											BIT HYDRAULICS DATA																							
Calcium (ppm)							40											Bit H.S.I.		Bit ΔP		Nozzles (32nds)																			
Excess Lime (lb/bbl)																				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							0.4%											0 lbs		0																					
Percent Drill Solids							0.4%																																		
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA			Manuf./Type Ultrerra U616S																									
Estimated Total LCM in System ppb													Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure																
Sample Taken By							C. Beasley				P.Blair				108 ft																										
Remarks/Recommendations: OBM RECEIVED: 1183 F/RedwoodB1H 1411 F/Mudplant Pretreat Active: 8 sx SAPP and Detergent. Sweep: 2 sx SAPP 10 gallons detergent Spud load inventory will be added on daylight report.										Rig Activity: Received 2 loads bulk barite and 2 loads diesel. Raised derrick at 03:00 10-5-21 and making final preparations to spud @ appx. 03-04:00 10-6-21. Began filling pits with fresh water, leaking noticed and discontinued until problem resolved. Pretreatment and sweep have been mixed. Continue to rig up while picking up BHA.																															
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.																		\$5,973.93							\$10,053.93									
										INCLUDING 3RD PARTY CHARGES																		\$5,973.93							\$10,053.93						

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

	2,594
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10/07/21

110 Old Market St.
St Martinville, LA 70582

Report #3

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

0.0° 2,816' TVD

Operator MAGNOLIA OIL & GAS							Contractor PATTERSON			County / Parish / Block WASHINGTON			Engineer Start Date 10/04/21		24 hr fig. 2,816 ft		Drilled Depth 2,816 ft																							
Well Name and No. BIGHORN PLAINS H02 BH							Rig Name and No. 248			State TEXAS			Spud Date 10/06/21		Current ROP 700 ft/hr		Activity Drilling																							
Report for Kevin Burt/Chris Mayeux							Report for Tool Pusher			Field / OCS-G # GIDDINGS			Fluid Type WBM		Circulating Rate 917 gpm		Circulating Pressure 2,000 psi																							
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																								
Weight 8.4-9.6		PV 0-10		YP 0-10		GELS <5 <10		pH 6-9		API fl <25		% Solids 2-10		In Pits 615 bbl In Hole 454 bbl Active 1069 bbl Storage <u>2699 bbl</u> Tot. on Location 3768 bbl		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min 143 gal/min 458		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min 143 gal/min 458		Liner Size Stroke bbl/stk 0.0000 stk/min gal/min 0																				
							10/7/21				10/6/21																													
Time Sample Taken							0:30				11:30																													
Sample Location							pit				pit																													
Flowline Temperature °F													PHHP = 1070 CIRCULATION DATA n = 0.737 K = 15.441																											
Depth (ft)							2,630'						Bit Depth = 2,816 '			Washout = 0%			Pump Efficiency = 95%																					
Mud Weight (ppg)							8.8				8.4		Drill String Disp.		Volume to Bit 47.6 bbl Bottoms Up Vol. 406.5 bbl Riser Ann. Vol. -2.6 bbl		Strokes To Bit 624 BottomsUp Stks 5,328 Riser Strokes -34		Time To Bit 2 min BottomsUp Time 19 min Riser Circ. Time 0 min																					
600 rpm							5				1		25.3 bbl																											
300 rpm							3				1		DRILLING ASSEMBLY DATA							SOLIDS CONTROL																				
200 rpm							2				1		Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours																						
100 rpm							1				1		Drill Pipe 5.000 4.276 2,363' 0'					Shaker 1 140 10.0																						
6 rpm							1				1		Hevi Wt 5.000 3.800 330' 2,363'					Shaker 2 140 10.0																						
3 rpm							1				1		Other Pipe 7.875 3.250 85' 2,693'					Shaker 3 140 10.0																						
Plastic Viscosity (cp) @ 120 °F							2						Dir. BHA 8.000 2.000 38' 2,778'					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 10.0																						
Gel Strength (lb/100 ft²) 30 min							1				1		Riser 20 108'					VOLUME ACCOUNTING (bbls)																						
API Filtrate / Cake Thickness							12/1						Surface 108'					Prev. Total on Location 3104.2																						
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 108'					Transferred In(+)/Out(-) 131.0																						
Retort Solids Content							3.4%				0.4%		Washout 1					Oil Added (+) 0.0																						
Retort Oil Content													Washout 2					Barite Added (+) 0.0																						
Retort Water Content							96.6%				99.6%		Open Hole Size 13.500 2,816'					Other Product Usage (+) 2.4																						
Sand Content							0.2%				0%		ANNULAR GEOMETRY & RHEOLOGY							Water Added (+) 1278.4																				
M.B.T. (Methylene Blue Capacity) (ppb)							5.0						annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal		Left on Cuttings (-) -747.8																	
pH							7.0				7.0												Centrifuge																	
Alkalinity, Mud Pm							0.1						0x5 108'		-898.6				9.69																					
Alkalinities, Filtrate Pf/Mf													13.5x5 2,363'		142.9		turb		10.15		Est. Total on Location 3768.1																			
Chlorides (mg/L)							600				400		13.5x5 2,693'		142.9		turb		11.28		Est. Losses/Gains (-)/(+) 0.0																			
Calcium (ppm)							240				40		13.5x7.875 2,778'		186.9		turb		12.38		BIT HYDRAULICS DATA																			
Excess Lime (lb/bbl)													13.5x8 2,816'		190.0		turb		13.51		Bit H.S.I.		Bit ΔP		Nozzles (32nds)															
Average Specific Gravity of Solids							2.60		2.60		2.60										1.39		372 psi		14 14 14															
Percent Low Gravity Solids							3.4%				0.4%										Bit Impact Force		Nozzle Velocity (ft/sec)		14 14 14															
Percent Drill Solids							3.4%				0.4%										908 lbs		217																	
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA			Manuf./Type Ultrerra / PDC			700 lbs																					
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		13 1/2		108 ft		10.0		2,816 ft		281.6		1,645 psi		2,571 psi															
Remarks/Recommendations: OBM RECEIVED: Returned 154bbls 11.0ppg to mud plant and received 285bbls 8.0ppg. Pretreat Active: 10sx SAPP and 50gal Detergent. Sweep: 2sx SAPP 10 gallons detergent / 100bbls water										Rig Activity: Finish rig up operations and rig service. Pick up BHA. Drill from 100' to 2,816'. Drilling ahead at report time pumping 30bbls soap/sapp sweeps every connection, adding soap/sapp sticks down drill pipe every connection, and pumping 100bbls soap/sapp sweeps every 1000'. Dumping sand trap and diluting active system with freshwater as needed to control MW. Stopped adding SAPP at 2,600' and will let weight creep up to 9.1-9.2ppg by TD. Will pump 2 tandem hi-vis sweeps at TD and circulate clean.																														
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 1 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.															\$4,286.88							\$14,340.81											
										INCLUDING 3RD PARTY CHARGES															\$4,286.88							\$14,340.81								

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

2,725

10/08/21

110 Old Market St.
St Martinville, LA 70582

Report #4

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

0.0°

0' TVD

Operator MAGNOLIA OIL & GAS							Contractor PATTERSON			County / Parish / Block WASHINGTON			Engineer Start Date 10/04/21		24 hr fig. 0 ft		Drilled Depth 3,020 ft													
Well Name and No. BIGHORN PLAINS H02 BH							Rig Name and No. 248			State TEXAS			Spud Date 10/06/21		Current ROP 0 ft/hr		Activity Skid Rig													
Report for Kevin Burt/Chris Mayeux							Report for Tool Pusher			Field / OCS-G # GIDDINGS			Fluid Type WBM		Circulating Rate 917 gpm		Circulating Pressure													
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER														
Weight 8.4-9.6		PV 0-10		YP 0-10		GELS <5 <10		pH 6-9		API fl <25		% Solids 2-10		In Pits 0 bbl In Hole 280 bbl Active 0 bbl Storage <u>0 bbl</u> Tot. on Location 280 bbl		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min 143 gal/min 458		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min 143 gal/min 458		Liner Size Stroke bbl/stk 0.0000 stk/min gal/min 0										
							10/7/21																							
Time Sample Taken							0:30																							
Sample Location							pit																							
Flowline Temperature °F													PHHP = 0 CIRCULATION DATA n = 0.737 K = 15.441																	
Depth (ft)							2,630'						Bit Depth = ' Washout = 0%			Pump Efficiency = 95%														
Mud Weight (ppg)							8.8						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 0 BottomsUp Stks 0 Riser Strokes 0		Time To Bit 0 min BottomsUp Time 0 min Riser Circ. Time 0 min												
Funnel Vis (sec/qt) @ 90 °F							28																							
600 rpm							5																							
300 rpm							3						DRILLING ASSEMBLY DATA					SOLIDS CONTROL												
200 rpm							2						Tubulars OD (in.) ID (in.) Length Top Drill Pipe 0' 0' Hevi Wt 0' Other Pipe 0' Dir. BHA 0'					Unit Screens Hours												
100 rpm							1											Shaker 1 140												
6 rpm							1											Shaker 2 140												
3 rpm							1											Shaker 3 140												
Plastic Viscosity (cp) @ 120 °F							2											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 Riser 20 108' Surface 10 3/4 9.950 3,020' 108' Int. Csg. 108' Washout 1 Washout 2 Open Hole Size 0.000 3,020'					Centrifuge 1												
Gel Strength (lb/100 ft²) 30 min							1											VOLUME ACCOUNTING (bbls)												
API Filtrate / Cake Thickness							12/1											Prev. Total on Location 280.1												
HTHP Filtrate / Cake Thickness @ 0 °F																		Transferred In(+)/Out(-)												
Retort Solids Content							3.4%											Oil Added (+) 0.0												
Retort Oil Content															Barite Added (+) 0.0															
Retort Water Content							96.6%								Other Product Usage (+) 0.0															
Sand Content							0.2%								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											Centrifuge												
Alkalinity, Mud Pm							0.1											Non-Recoverable Vol. (-)												
Alkalinities, Filtrate Pf/Mf																		Est. Total on Location 280.1												
Chlorides (mg/L)							600											Est. Losses/Gains (-)/(+) 0.0												
Calcium (ppm)							240											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																			
Percent Low Gravity Solids							3.4%											Bit Impact Force		Nozzle Velocity (ft/sec)										
Percent Drill Solids							3.4%																							
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				P.Blair																			
Remarks/Recommendations: OBM RECEIVED: 280bbls of OBM left in hole and 2,419bbls transferred to Bighorn Peak H04 BH. Transferred all products and mud to next well.										Rig Activity: TD surface interval @ 3,020' 01:00 10-07-21. Condition mud and circulate sweeps around, clean hole. POOH T/BHA, R/U casing equipment. M/U shoe track and test. Run 10.75" surface casing T/bottom, landed @ 3,009'. Circulate 1.5 times casing capacity, R/D CRT and landing joint. R/U cement crew for offline cement surface job. Pump same with returns at cellar, diverted to open top for disposal, and bumped plug with 9.0ppg OBM. Rig was skid T/Bighorn Peak H04 BH. Dumped pits and filled with fresh water and treatments of soap and SAPP for spud in. Upon rig service experienced Crownomatic issues, resolving same at pm report time.																				
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: -							\$0.00							\$14,340.81																
W P Y g G p A S C 1 1 1 1 1 1 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.																							
										INCLUDING 3RD PARTY CHARGES							\$0.00							\$14,340.81						

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

306

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

		WEEK 1							WEEK 2							WEEK 3							
		Date	10/5/21	10/6/21	10/7/21	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
			Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2								
	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020							
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020								
-	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	280	2,327	2,327	2,327	2,327	2,327	2,327	2,327	2,327
-	Chemical Additions																						
-	Base Fluid Added																						
-	Barite Increase																						
2,332	Weighted Mud Added			285											2,047								
-	Slurry Added																						
-	Water Added																						
-	Added for Washout																						
2,332	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	-	-	-	-	-	-	-	-
-	Surface Losses																						
-	Formation Loss																						
-	Mud Loss to Cuttings																						
26	Unrecoverable Volume				26																		
-	Centrifuge Losses																						
26	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,573	Mud Transferred Out			154	2,419																		
2,327	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	280	2,327	2,327	2,327	2,327	2,327	2,327	2,327	2,327	2,327
-	Mud Recovered																						
2,353	Comments:									Comments:						Comments:							
	10/5/21	Received 2594bls from Rommel pad.							10/12/21						10/19/21								
	10/6/21	No losses.							10/13/21						10/20/21								
	10/7/21	No losses.							10/14/21						10/21/21								
	10/8/21	Lost 26bls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bls OBM to the HO4 leaving 280bls in casing on HO2.							10/15/21						10/22/21								
	10/9/21								10/16/21						10/23/21								
	10/10/21								10/17/21 Transferred 2047bls OBM from the HO4 to the HO2. 280bls already pre-loaded in casing from surface interval.						10/24/21								
10/11/21								10/18/21						10/25/21									

10/18/21

110 Old Market St.
St Martinville, LA 70582

Report #6

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

16.3° 6,748' TVD

Operator MAGNOLIA OIL & GAS				Contractor PATTERSON			County / Parish / Block WASHINGTON			Engineer Start Date 10/04/21		24 hr fig. 3,952 ft		Drilled Depth 6,980 ft		
Well Name and No. BIGHORN PLAINS H02 BH				Rig Name and No. 248			State TEXAS			Spud Date 10/06/21		Current ROP 461 ft/hr		Activity DRILLING		
Report for Brandon Parks / Jim Harrison				Report for Tool Pusher			Field / OCS-G # GIDDINGS			Fluid Type OBM		Circulating Rate 820 gpm		Circulating Pressure 4,380 psi		
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1		PUMP #2		RISER BOOSTER		
Weight 15-17	PV 20-40	YP 8-20	E.S. >500	CaCl2 ±275K	GELS <10 <15	HTHP <6	In Pits 500 bbl	In Hole 598 bbl	Liner Size 5.25	Stroke 12	Liner Size 5.25	Stroke 12	Liner Size			
				10/18/21		10/17/21	Active 1098 bbl		bbl/stk 0.0763		bbl/stk 0.0763		bbl/stk 0.0000			
Time Sample Taken				0:30		15:30	Storage <u>1300 bbl</u>		stk/min 128		stk/min 128		stk/min			
Sample Location				pit		suction	Tot. on Location 2398 bbl		gal/min 410		gal/min 410		gal/min 0			
Flowline Temperature °F				132 °F		110 °F	PHHP = 2097 CIRCULATION DATA n = 0.632 K = 197.766									
Depth (ft)				6,703'		3,830'	Bit Depth = 6,980 '			Washout = 0%		Pump Efficiency = 95%				
Mud Weight (ppg)				9.2		9.0	Drill String Disp. 57.2 bbl	Volume to Bit 119.9 bbl	Strokes To Bit 1,571	Time To Bit 6 min						
Funnel Vis (sec/qt) @ 121 °F				46		48		Bottoms Up Vol. 478.1 bbl	BottomsUp Stks 6,266	BottomsUp Time 24 min						
600 rpm				31		25		Riser Ann. Vol. -2.6 bbl	Riser Strokes -34	Riser Circ. Time 0 min						
300 rpm				20		17	DRILLING ASSEMBLY DATA					SOLIDS CONTROL				
200 rpm				16		15	Tubulars	OD (in.)	ID (in.)	Length	Top	Unit	Screens	Hours		
100 rpm				12		12	Drill Pipe	5.000	4.276	6,341'	0'	Shaker 1	140	18.0		
6 rpm				6		5	Hevi Wt	5.000	3.800	334'	6,341'	Shaker 2	140	18.0		
3 rpm				5		4	Collars	6.500	2.750	190'	6,675'	Shaker 3	140	18.0		
Plastic Viscosity (cp) @ 150 °F				11		8	Collars	8.000	3.250	115'	6,865'	Desander				
Yield Point (lb/100 ft²) T0 = 4				9		9	CASING & HOLE DATA					Desilter				
Gel Strength (lb/100 ft²) 10 sec/10 min				6/7		5/8	Casing	OD (in.)	ID (in.)	Depth	Top	Centrifuge 1	0.0			
Gel Strength (lb/100 ft²) 30 min				9		9	Riser	20		108'		VOLUME ACCOUNTING (bbls)				
HTHP Filtrate (cm/30 min) @ 300 °F				8.4		9.0	Surface	10 3/4	9.950	3,020'	108'	Prev. Total on Location	2327.1			
HTHP Cake Thickness (32nds)				2.0		2.0	Int. Csg.			108'		Transferred In(+)/Out(-)				
Retort Solids Content				9.6%		10%	Washout 1					Oil Added (+)	321.7			
Corrected Solids (vol%)				7.3%		7.6%	Washout 2					Barite Added (+)	0.0			
Retort Oil Content				63.5%		64%	Open Hole Size		9.875	6,980'		Other Product Usage (+)	8.0			
Retort Water Content				26.9%		26%	ANNULAR GEOMETRY & RHEOLOGY					Water Added (+)	3.3			
O/W Ratio				70:30		71:29	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-)	-262.1			
Whole Mud Chlorides (mg/L)				58,000		61,000						Centrifuge				
Water Phase Salinity (ppm)				252,672		268,951	0x5	108'	-804.4		9.57	Non-Recoverable Vol. (-)				
Whole Mud Alkalinity, Pom				2.1		2.5	9.95x5	3,020'	271.7	turb	9.78	Est. Total on Location	2398.1			
Excess Lime (lb/bbl)				2.7 ppb		3.3 ppb	9.875x5	6,341'	277.3	turb	9.97	Est. Losses/Gains (-)/(+)	0.0			
Electrical Stability (volts)				393 v		410 v	9.875x5	6,675'	277.3	turb	10.32	BIT HYDRAULICS DATA				
Average Specific Gravity of Solids				2.88		2.46	9.875x6.5	6,865'	363.9	turb	10.68	Bit H.S.I.	Bit ΔP	Nozzles (32nds)		
Percent Low Gravity Solids				5.1%		7.1%	9.875x8	6,980'	600.0	turb	11.08	1.60	257 psi	14	14	14
ppb Low Gravity Solids				42 ppb		58 ppb						Bit Impact Force	Nozzle Velocity (ft/sec)	14	14	14
Percent Barite				2.2%		0.5%								16	16	16
ppb Barite				32 ppb		7 ppb	BIT DATA		Manuf./Type		Ulterra PDC	690 lbs	177			
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	3,020 ft	15.0	3,952 ft	263.5	2,691 psi		4,380 psi		
Remarks/Recommendations: OBM RECEIVED: 2142bls PLAN FORWARD: TD Intermediate section and POOH. Staging MW up to 9.8ppg by TD starting at 6,400'. Treating active system with maintenance amounts of Lime, Opti-G, CaCl, Mul, WA, and Bentone 910/990. Maintaining MW with diesel additions.							Rig Activity: Pick up BHA TIH. Drill cement and float equipment from 2,927' to 3,030' (10' new formation). Circulate bottoms up maintaining a consistant 8.8ppg mud wt. Perform FIT test to 11.6 EMW. Drilling ahead at 6,980' pumping 10bbl hi-vis sweeps every 300' at report time. Weighed up to 9.2ppg before entering Midway formation. Weill weigh up to 9.4 before entering Navarro and continue to weigh up to 9.8ppg by TD. ROP 461'/hr. MWD Temp 194 F.									
Eng. 1: Mike Washburn		Eng. 2: Nick Dilly		WH 1: MIDLAND		WH 2: WH #2		Rig Phone:				Daily Total		Cumulative Cost		
Phone: 361-945-5777		Phone: 337-207-8848		Phone: 432-686-7361		Phone: -						\$8,018.82		\$24,399.63		
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				\$44,153.57		\$60,534.38	

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

2,353

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 MAGNOLIA OIL & GAS				Contractor PATTERSON			County / Parish / Block WASHINGTON			Engineer Start Date 10/04/21			24 hr fig. 2,860 ft		Drilled Depth 9,840 ft			
Well Name and No. BIGHORN PLAINS H02 BH				Rig Name and No. 248			State TEXAS			Spud Date 10/06/21			Current ROP 40 ft/hr		Activity Drilling			
Report for Brandon Parks / Jim Harrison				Report for Tool Pusher			Field / OCS-G # GIDDINGS			Fluid Type OBM			Circulating Rate 865 gpm		Circulating Pressure 5,320 psi			
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1		PUMP #2		RISER BOOSTER				
Weight 15-17	PV 20-40	YP 8-20	E.S. >500	CaCl2 ±275K	GELS <10 <15	HTHP <6	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						
Gel Strength (lb/100 ft²) 30 min				9		9	Riser 20 108'					VOLUME ACCOUNTING (bbls)						
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						
Electrical Stability (volts)				488 v		460 v	9.875x5 9,535'	292.5	turb	10.12		BIT HYDRAULICS DATA						
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		818 lbs	186	14	14	14		
ppb Low Gravity Solids				50 ppb		56 ppb								Bit Impact Force	Nozzle Velocity (ft/sec)	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: 2142bbls 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]

OUTSOURCE FLUID SOLUTIONS LLC.

FLUID VOLUME ACCOUNTING

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

		WEEK 1							WEEK 2							WEEK 3							
		Date	10/5/21	10/6/21	10/7/21	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
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	
Grand Totals	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840						
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840							
6,820	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	-	-	-	-	-	-	
646	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	-	-	-	-	-	-	
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,350	2,350	2,350	2,350	2,350	
39	Chemical Additions														8	31							
531	Base Fluid Added														322	209							
14	Barite Increase															14							
2,332	Weighted Mud Added			285											2,047								
-	Slurry Added																						
26	Water Added														3	23							
-	Added for Washout																						
2,942	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	-	-	-	-	-	
-	Surface Losses																						
-	Formation Loss																						
587	Mud Loss to Cuttings														262	325							
26	Unrecoverable Volume				26																		
-	Centrifuge Losses																						
613	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	-	-	-	-	-	-	
2,573	Mud Transferred Out			154	2,419																		
2,350	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,350	2,350	2,350	2,350	2,350	2,350	
-	Mud Recovered																						
2,353	Comments:							Comments:							Comments:								
	10/5/21 Received 2594bls from Rommel pad.							10/12/21							10/19/21 Lost 325bls to mud on cuttings while drilling.								
	10/6/21 No losses.							10/13/21							10/20/21								
	10/7/21 No losses.							10/14/21							10/21/21								
	10/8/21 Lost 26bls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bls OBM to the HO4 leaving 280bls in casing on HO2.							10/15/21							10/22/21								
	10/9/21							10/16/21							10/23/21								
	10/10/21							10/17/21 Transferred 2047bls OBM from the HO4 to the HO2. 280bls already pre-loaded in casing from surface interval.							10/24/21								
10/11/21							10/18/21 Lost 262bls to mud on cuttings while drilling.							10/25/21									

10/21/21

110 Old Market St.
St Martinville, LA 70582

Report #9

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		10/04/21		0 ft		9,928 ft					
Well Name and No.				Rig Name and No.			State		Spud Date		Current ROP		Activity					
BIGHORN PLAINS H02 BH				248			TEXAS		10/06/21		0 ft/hr		Test BOP					
Report for				Report for			Field / OCS-G #		Fluid Type		Circulating Rate		Circulating Pressure					
Brandon Parks / Jim Harrison				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	577 bbl	Liner Size	4.75	Liner Size	4.75	Liner Size					
15-17	20-40	8-20	>500	±275K	<10 <15	<6	In Hole	451 bbl	Stroke	12	Stroke	12	Stroke					
				10/21/21		10/20/21	Active	577 bbl	bbl/stk	0.0625	bbl/stk	0.0625	bbl/stk 0.0000					
Time Sample Taken				0:30		14:00	Storage	1454 bbl	stk/min	0	stk/min	0	stk/min					
Sample Location				pit		suction	Tot. on Location	2482 bbl	gal/min	0	gal/min	0	gal/min 0					
Flowline Temperature °F							PHHP = 0 CIRCULATION DATA n = 0.695 K = 140.295											
Depth (ft)				9,928'		9,928'	Bit Depth = '			Washout = 0%		Pump Efficiency = 95%						
Mud Weight (ppg)				9.2		9.8	Drill String Disp.	Volume to Bit	0.0 bbl	Strokes To Bit		Time To Bit						
Funnel Vis (sec/qt)				@ 135 °F	45	50		Bottoms Up Vol.	0.0 bbl	BottomsUp Stks		BottomsUp Time						
600 rpm				34		35		0.0 bbl	Riser Ann. Vol.	0.0 bbl	Riser Strokes		Riser Circ. Time					
300 rpm				21		22	DRILLING ASSEMBLY DATA					SOLIDS CONTROL						
200 rpm				15		16	Tubulars	OD (in.)	ID (in.)	Length	Top	Unit	Screens	Hours				
100 rpm				11		13	Drill Pipe	0'			0'	Shaker 1	200					
6 rpm				6		6	Hevi Wt				0'	Shaker 2	200					
3 rpm				5		5	Collars				0'	Shaker 3	200					
Plastic Viscosity (cp)				@ 150 °F	13		13	Collars				0'	Desander					
Yield Point (lb/100 ft²)				T0 = 4	8		9	CASING & HOLE DATA					Desilter					
Gel Strength (lb/100 ft²)				10 sec/10 min	5/7		5/8	Casing	OD (in.)	ID (in.)	Depth	Top	Centrifuge 1					
Gel Strength (lb/100 ft²)				30 min	9		10	Riser	20	108'			VOLUME ACCOUNTING (bbls)					
HTHP Filtrate (cm/30 min)				@ 300 °F	7.2		7.4	Surface	10 3/4	9.950	3,020'	108'	Prev. Total on Location	2475.1				
HTHP Cake Thickness (32nds)					2.0		2.0	Int. Csg.	7 5/8	6.875	9,920'	108'	Transferred In(+)/Out(-)					
Retort Solids Content					10%		12.8%	Washout 1					Oil Added (+)	45.9				
Corrected Solids (vol%)					7.9%		10.6%	Washout 2					Barite Added (+)	0.0				
Retort Oil Content					68%		65%	Open Hole Size			0.000	9,928'	Other Product Usage (+)	0.0				
Retort Water Content					22%		22.2%	ANNULAR GEOMETRY & RHEOLOGY					Water Added (+)	13.5				
O/W Ratio					76:24		75:25	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-)	0.0				
Whole Mud Chlorides (mg/L)					52,000		55,500						Centrifuge	-18.0				
Water Phase Salinity (ppm)					270,413		281,620							Non-Recoverable Vol. (-)	-35.0			
Whole Mud Alkalinity, Pom					2.6		2.3							Est. Total on Location	2481.5			
Excess Lime (lb/bbl)					3.4 ppb		3 ppb							Est. Losses/Gains (-)/(+)	0.0			
Electrical Stability (volts)					420 v		468 v							BIT HYDRAULICS DATA				
Average Specific Gravity of Solids					2.92		3.04							Bit H.S.I.	Bit ΔP	Nozzles (32nds)		
Percent Low Gravity Solids					5.3%		6.4%											
ppb Low Gravity Solids					44 ppb		53 ppb							Bit Impact Force	Nozzle Velocity (ft/sec)			
Percent Barite					2.6%		4.1%											
ppb Barite					37 ppb		59 ppb	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				C. Beasley	0	M Washburn												
Remarks/Recommendations:							Rig Activity:											
OBM RECEIVED: 2142bbls							Run 7-5/8" 29.7# P-110 intermediate casing to 9920'. Circulate 1.5 X casing capacity with full returns. Transfer 450 bbls active surface volume to frac tanks, rig up cementers and test lines to 4000PSI, pump 50 bbls 10.0# spacer then 292 bbls lead @ 11.8#, followed by 78 bbls tail cement at 16.2#, drop top plug and displace cement with 451 bbls of 9.1# OBM from frac tanks, discharge 35 bbls of spacer interface at surface. Processed active surface volume adding diesel and centrifuging from 9.8# to 9.2# Currently Testing BOPS. Shaker screens replaced with 200's on all shakers.											
PLAN FORWARD: Run Intermediate casing to TD and cement same.																		
No treatment while running casing.																		
Maintaining MW at 9.8ppg in active with diesel additions.																		
Used 50bbls of diesel to cut back OBM in frac tank to 9.1ppg for cement displacement.																		
Eng. 1: Mike Washburn		Eng. 2: Chris Beasley		WH 1: MIDLAND		WH 2: WH #2		Rig Phone:		Daily Total			Cumulative Cost					
Phone: 361-945-5777		Phone: 903-747-5377		Phone: 432-686-7361		Phone: -					\$2,315.00			\$48,471.73				
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							\$7,636.28			
									INCLUDING 3RD PARTY CHARGES					\$127,127.17				

MATERIAL CONSUMPTION

Date	Operator	Well Name and No.		Rig Name and No.		Report No.			
10/21/21	MAGNOLIA OIL & GAS	BIGHORN PLAINS H02 BH		248		Report #9			
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			42	\$1,967.28
PHPA LIQUID (pail)	5 gal	\$41.36	29		29				
EVO-LUBE	gal	\$14.00							
NEW GEL (PREMIUM)	100# sk	\$11.54							
ALUMINUM TRISTEARATE	25# sk	\$81.16							
CACL2 (50)	50# sk	\$14.32	364		364			84	\$1,202.88
LIME (50)	50# sk	\$5.88	375		375			223	\$1,311.24
OPTI - G	50# sk	\$32.44	160		160			80	\$2,595.20
BENTONE 38 (50)	50# sk	\$152.93	68		68				
BENTONE 910 (50)	50# sk	\$55.55	60		60			15	\$833.25
BENTONE 990 (50)	50# sk	\$88.61	74		74			22	\$1,949.42
OPTI - MUL	gal	\$11.40	330		330			495	\$5,643.00
OPTI - WET	gal	\$8.84	330		330			440	\$3,889.60
NEW PHALT	50# sk	\$38.72	90		90			68	\$2,632.96
OIL SORB (25)	25# sk	\$4.75	47		47				
NEW CARB (M)	50# sk	\$5.63	147		147				
CYBERSEAL	25# sk	\$24.40							
MAGMAFIBER F (25)	25# sk	\$28.05	240		240				
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 POWDER F (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			300	\$2,451.00

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

	Date	WEEK 1							WEEK 2							WEEK 3						
		10/5/21	10/6/21	10/7/21	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
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	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	6 3/4				
	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928			
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928				
6,908	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	88	-	-	-	-	
654	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	8	-	-	-	-	
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,482	2,482	
39	Chemical Additions														8	31						
705	Base Fluid Added														322	209	128	46				
21	Barite Increase															14	7					
2,332	Weighted Mud Added			285										2,047								
-	Slurry Added																					
40	Water Added														3	23		14				
-	Added for Washout																					
3,137	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	135	60	-	-	
-	Surface Losses																					
-	Formation Loss																					
597	Mud Loss to Cuttings														262	325	10					
61	Unrecoverable Volume				26													35				
18	Centrifuge Losses																	18				
676	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	10	53	-	-	-	
2,573	Mud Transferred Out			154	2,419																	
2,482	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,482	2,482	2,482	
-	Mud Recovered																					
2,353	Comments:								Comments:							Comments:						
	10/5/21 Received 2594bls from Rommel pad.								10/12/21							10/19/21 Lost 325bls to mud on cuttings while drilling.						
	10/6/21 No losses.								10/13/21							10/20/21 Lost 10bls to mud on cuttings while drilling and circulating clean up cycles.						
	10/7/21 No losses.								10/14/21							10/21/21						
	10/8/21 Lost 26bls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bls OBM to the HO4 leaving 280bls in casing on HO2.								10/15/21							10/22/21						
	10/9/21								10/16/21							10/23/21						
	10/10/21								10/17/21 Transferred 2047bls OBM from the HO4 to the HO2. 280bls already pre-loaded in casing from surface interval.							10/24/21						
10/11/21								10/18/21 Lost 262bls to mud on cuttings while drilling.							10/25/21							

10/22/21

110 Old Market St.
St Martinville, LA 70582

Report #10

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

3.6° 1,263' TVD

Operator MAGNOLIA OIL & GAS				Contractor PATTERSON			County / Parish / Block WASHINGTON		Engineer Start Date 10/04/21		24 hr fig. 0 ft		Drilled Depth 9,928 ft			
Well Name and No. BIGHORN PLAINS H02 BH				Rig Name and No. 248			State TEXAS		Spud Date 10/06/21		Current ROP 0 ft/hr		Activity TRIP			
Report for Brandon Parks / Jim Harrison				Report for Tool Pusher			Field / OCS-G # GIDDINGS		Fluid Type OBM		Circulating Rate 0 gpm		Circulating Pressure psi			
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)		PUMP #1		PUMP #2		RISER BOOSTER			
Weight 15-17		PV 20-40	YP 8-20	E.S. >500	CaCl2 ±275K	GELS <10 <15	HTHP <6	In Pits 633 bbl In Hole 442 bbl Active 677 bbl Storage <u>1454 bbl</u> Tot. on Location 2529 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		
				10/22/21		10/20/21										
Time Sample Taken				0:30		13:00										
Sample Location				pit		suction										
Flowline Temperature °F							PHHP = 0 CIRCULATION DATA n = 0.670 K = 172.089									
Depth (ft)				9,928'		9,928'	Bit Depth = 1,264 '			Washout = 0%		Pump Efficiency = 95%				
Mud Weight (ppg)				9.0		9.0	Drill String Disp. 8.8 bbl	Volume to Bit 17.0 bbl	Strokes To Bit	Time To Bit						
Funnel Vis (sec/qt) @ 110 °F				50		52		Bottoms Up Vol. 27.3 bbl	BottomsUp Stks			BottomsUp Time				
600 rpm				35		36		Riser Ann. Vol. -2.1 bbl	Riser Strokes			Riser Circ. Time				
300 rpm				22		22	DRILLING ASSEMBLY DATA					SOLIDS CONTROL				
200 rpm				16		16	Tubulars	OD (in.)	ID (in.)	Length	Top	Unit	Screens	Hours		
100 rpm				12		12	Drill Pipe	4.500	3.826	1,131'	0'	Shaker 1	200			
6 rpm				6		6	Dir. BHA	5.250	2.688	133'	1,131'	Shaker 2	200			
3 rpm				5		5	Collars				1,264'	Shaker 3	200			
Plastic Viscosity (cp) @ 150 °F				13		14	Collars				1,264'	Desander				
Yield Point (lb/100 ft²) T0 = 4				9		8	CASING & HOLE DATA								Desilter	
Gel Strength (lb/100 ft²) 10 sec/10 min				5/8		5/8	Casing	OD (in.)	ID (in.)	Depth	Top	Centrifuge 1				
Gel Strength (lb/100 ft²) 30 min				10		10	Riser	20		108'		VOLUME ACCOUNTING (bbls)				
HTHP Filtrate (cm/30 min) @ 300 °F				7.4		7.4	Surface	10 3/4	9.950	3,020'	108'	Prev. Total on Location	2479.2			
HTHP Cake Thickness (32nds)				2.0		2.0	Int. Csg.	7 5/8	6.875	9,920'	108'	Transferred In(+)/Out(-)				
Retort Solids Content				9.4%		9.4%	Washout 1					Oil Added (+)	79.7			
Corrected Solids (vol%)				7.3%		7.4%	Washout 2					Barite Added (+)	0.0			
Retort Oil Content				68.6%		68.6%	Open Hole Size	6.750	9,928'			Other Product Usage (+)	0.0			
Retort Water Content				22%		22%	ANNULAR GEOMETRY & RHEOLOGY								Water Added (+)	
O/W Ratio				76:24		76:24	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-)	0.0			
Whole Mud Chlorides (mg/L)				51,500		51,000						Centrifuge	-29.8			
Water Phase Salinity (ppm)				268,511		266,599	0x4.5	108'	0.0		9.00	Non-Recoverable Vol. (-)				
Whole Mud Alkalinity, Pom				2.4		2.5	6.875x4.5	1,131'	0.0	lam	9.00	Est. Total on Location	2529.1			
Excess Lime (lb/bbl)				3.1 ppb		3.3 ppb	6.875x5.25	1,264'	0.0	lam	9.00	Est. Losses/Gains (-)/(+)	0.0			
Electrical Stability (volts)				412 v		410 v	BIT HYDRAULICS DATA									
Average Specific Gravity of Solids				2.77		2.76						Bit H.S.I.	Bit ΔP	Nozzles (32nds)		
Percent Low Gravity Solids				5.6%		5.7%						0.00	psi	18 18 18		
ppb Low Gravity Solids				46 ppb		46 ppb						Bit Impact Force	Nozzle Velocity (ft/sec)	18 18 18		
Percent Barite				1.7%		1.7%										
ppb Barite				25 ppb		25 ppb	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				C. Beasley	0	M Washburn	6 3/4	9,928 ft								
Remarks/Recommendations: OBM RECEIVED: 2142bbls PLAN FORWARD: TIH & and build curve. Adding gels to increase rheology Maintaining MW at 9 ppg in active with diesel additions.							Rig Activity: Testing BOP's and surface equipment. Reduce mud wt. from 9.8 to 9.2 last night, continue processing with diesel dilution and centrifuge to 9.0. Change pump liners from 5.25 to 4.75. Ordered an additional 100 bbls 17.5 kill mud from Newpark Madisonville. Shale shaker panels were changed from 170 to 200 mesh. Picked up 2805' of 4.5" DP. Currently making up 6 3/4" bit and BHA and TIH.									
Eng. 1: Mike Washburn Phone: 361-945-5777				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 E C g G H O 0 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.								\$2,040.00		\$50,511.73		
							INCLUDING 3RD PARTY CHARGES					\$11,274.96		\$138,402.13		

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

	Date	WEEK 1							WEEK 2							WEEK 3						
		10/5/21	10/6/21	10/7/21	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
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	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	6 3/4	6 3/4	9,928		
	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928		
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928			
6,908	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	88	-	-	-	-	-
654	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	8	-	-	-	-	-
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,532	2,532
39	Chemical Additions														8	31						
785	Base Fluid Added														322	209	128	46	80			
21	Barite Increase															14	7					
2,332	Weighted Mud Added			285											2,047							
-	Slurry Added																					
40	Water Added														3	23		14				
-	Added for Washout																					
3,217	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	135	60	80	-	-
-	Surface Losses																					
-	Formation Loss																					
597	Mud Loss to Cuttings														262	325	10					
61	Unrecoverable Volume				26													35				
48	Centrifuge Losses																	18	30			
706	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	10	53	30	-	-	-
2,573	Mud Transferred Out			154	2,419																	
2,532	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,532	2,532	2,532
-	Mud Recovered																					
2,353	Comments:								Comments:							Comments:						
	10/5/21 Received 2594bls from Rommel pad.								10/12/21							10/19/21 Lost 325bls to mud on cuttings while drilling.						
	10/6/21 No losses.								10/13/21							10/20/21 Lost 10bls to mud on cuttings while drilling and circulating clean up cycles.						
	10/7/21 No losses.								10/14/21							10/21/21						
	10/8/21 Lost 26bls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bls OBM to the HO4 leaving 280bls in casing on HO2.								10/15/21							10/22/21						
	10/9/21								10/16/21							10/23/21						
	10/10/21								10/17/21 Transferred 2047bls OBM from the HO4 to the HO2. 280bls already pre-loaded in casing from surface interval.							10/24/21						
10/11/21								10/18/21 Lost 262bls to mud on cuttings while drilling.							10/25/21							

10/23/21

110 Old Market St.
St Martinville, LA 70582

Report #11

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

21.1° 10,514' TVD

Operator				Contractor			County / Parish / Block			Engineer Start Date			24 hr fig.		Drilled Depth																				
MAGNOLIA OIL & GAS							PATTERSON			WASHINGTON			10/04/21			933 ft		10,861 ft																	
Well Name and No.							Rig Name and No.			State			Spud Date			Current ROP		Activity																	
BIGHORN PLAINS H02 BH							248			TEXAS			10/06/21			200 ft/hr		DRLG CURVE																	
Report for							Report for			Field / OCS-G #			Fluid Type			Circulating Rate		Circulating Pressure																	
Brandon Parks / Jim Harrison							Tool Pusher			GIDDINGS			OBM			352 gpm		3,483 psi																	
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																			
Weight		PV		YP		E.S.		CaCl2		GELS		HTHP		In Pits		574 bbl		Liner Size		4.75		Liner Size		4.75		Liner Size									
15-17		20-40		8-20		>500		±275K		<10 <15		<6		In Hole		435 bbl		Stroke		12		Stroke		12		Stroke									
							10/23/21				10/22/21		Active		1009 bbl		bbl/stk		0.0625		bbl/stk		0.0625		bbl/stk		0.0000								
Time Sample Taken							0:30				13:00		Storage		1506 bbl		stk/min		68		stk/min		66		stk/min										
Sample Location							pit				suction		Tot. on Location		2515 bbl		gal/min		178		gal/min		173		gal/min		0								
Flowline Temperature °F							120 °F				116 °F		PHHP = 714 CIRCULATION DATA n = 0.642 K = 233.310																						
Depth (ft)							10,861'				9,928'		Bit Depth = 10,861 '				Washout = 5%				Pump Efficiency = 95%														
Mud Weight (ppg)							9.1				9.0		Drill String Disp.		Volume to Bit		153.5 bbl		Strokes To Bit		2,457		Time To Bit				18 min								
Funnel Vis (sec/qt)							@ 112 °F		50		52				Bottoms Up Vol.		281.8 bbl		BottomsUp Stks		4,512		BottomsUp Time				34 min								
600 rpm							39				38		61.1 bbl		Riser Ann. Vol.		-2.1 bbl		Riser Strokes		-34		Riser Circ. Time				0 min								
300 rpm							25				24		DRILLING ASSEMBLY DATA										SOLIDS CONTROL												
200 rpm							16				15		Tubulars		OD (in.)		ID (in.)		Length		Top		Unit		Screens		Hours								
100 rpm							12				11		Drill Pipe		4.500		3.826		10,728'		0'		Shaker 1		200										
6 rpm							6				6		Dir. BHA		5.250		2.688		133'		10,728'		Shaker 2		200										
3 rpm							5				5		Collars								10,861'		Shaker 3		200										
Plastic Viscosity (cp)							@ 150 °F		14		14		Collars								10,861'		Desander												
Yield Point (lb/100 ft²)							T0 = 4		11		10		CASING & HOLE DATA										Desilter												
Gel Strength (lb/100 ft²)							10 sec/10 min		5/8		5/8		Casing		OD (in.)		ID (in.)		Depth		Top		Centrifuge 1		0.0										
Gel Strength (lb/100 ft²)							30 min		10		10		Riser		20				108'				VOLUME ACCOUNTING (bbls)												
HTHP Filtrate (cm/30 min)							@ 300 °F		7.0		7.0		Surface		10 3/4		9.950		3,020'		108'		Prev. Total on Location				2529.1								
HTHP Cake Thickness (32nds)									2.0		2.0		Int. Csg.		7 5/8		6.875		9,920'		108'		Transferred In(+)/Out(-)				107.0								
Retort Solids Content									10%		9.4%		Washout 1										Oil Added (+)				86.0								
Corrected Solids (vol%)									7.8%		7.3%		Washout 2										Barite Added (+)				20.9								
Retort Oil Content									67.5%		67.6%		Open Hole Size		7.088		10,861'						Other Product Usage (+)				8.6								
Retort Water Content									22.5%		23%		ANNULAR GEOMETRY & RHEOLOGY										Water Added (+)				30.0								
O/W Ratio									75:25		75:25		annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal		Left on Cuttings (-)				-68.3								
Whole Mud Chlorides (mg/L)									54,000		53,000												Non-Recoverable Vol. (-)				-40.0								
Water Phase Salinity (ppm)									273,435		265,430		0x4.5		108'		-425.5		9.30				Lost Returns (-)				-157.9								
Whole Mud Alkalinity, Pom									2.0		2.2		6.875x4.5		9,920'		318.9		turb		10.02		Est. Total on Location				2515.3								
Excess Lime (lb/bbl)									2.6 ppb		2.9 ppb		7.088x4.5		10,728'		287.3		turb		10.19		Est. Losses/Gains (-)/(+)				0.0								
Electrical Stability (volts)									501 v		405 v		7.088x5.25		10,861'		380.0		turb		10.39		BIT HYDRAULICS DATA												
Average Specific Gravity of Solids									2.75		2.72												Bit H.S.I.		Bit ΔP		Nozzles (32nds)								
Percent Low Gravity Solids									6%		5.7%												0.27		47 psi					18		18		18	
ppb Low Gravity Solids									49 ppb		47 ppb												Bit Impact Force		Nozzle Velocity (ft/sec)					18		18		18	
Percent Barite									1.8%		1.6%																								
ppb Barite									26 ppb		22 ppb		BIT DATA			Manuf./Type			HALLIBURTON PDC			125 lbs		76											
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		M Washburn		6 3/4		9,928 ft		14.0		933 ft		66.6		3,483 psi		4,688 psi										
Remarks/Recommendations:										Rig Activity:																									
OBM RECEIVED: 2249bbls										Continue to pick up 4-1/2" drillpipe to 9828, fill pipe and circulate thru gas buster, drill float equipment and 10' of new formation to 9938, circulate and verify a consistant 9.0# system mud wt. Perform F.I.T. to 13.0 EMW. Cuurently rotate and sliding, building curve, bit passing 10,861, INCL 87.65 deg. Maintain mud wt at 9.1#, adding water and diesel, adjusting O:W:R. MWD temp 237. Max gas: 371 units. MW was increased to 9.1 @ 10,500'. Noticed seepage @ 10,650'. Reducing MW to 9.0.																									
PLAN FORWARD: Drill curve & Lateral																																			
Adding gels to increase rheology																																			
Maintaining MW at 9.1 ppg in active.																																			
Eng. 1:		Mike Washburn			Eng. 2:		Chris Beasley			WH 1:		MIDLAND			WH 2:		WH #2			Rig Phone:			Daily Total		Cumulative Cost										
Phone:		361-945-5777			Phone:		903-747-5377			Phone:		432-686-7361			Phone:		-						\$9,033.20		\$59,544.93										
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	1	1	1	1	2	1																											
										INCLUDING 3RD PARTY CHARGES										\$18,693.20		\$157,095.33													

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

	Date	WEEK 1							WEEK 2							WEEK 3						
		10/5/21	10/6/21	10/7/21	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
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	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	6 3/4	6 3/4	6 3/4		
	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	6,980	9,928	9,928	9,928	10,861	
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861		
7,841	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	88	-	-	933	-	
696	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	8	-	-	41	-	
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	
47	Chemical Additions														8	31			8			
870	Base Fluid Added														322	209	128	46	80	85		
41	Barite Increase															14	7			20		
2,439	Weighted Mud Added			285										2,047						107		
-	Slurry Added																					
69	Water Added														3	23		14		29		
-	Added for Washout																					
3,466	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	135	60	80	249	
-	Surface Losses																					
158	Formation Loss																		158			
665	Mud Loss to Cuttings														262	325	10			68		
81	Unrecoverable Volume				26													35		20		
68	Centrifuge Losses																	18	30	20		
972	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	10	53	30	266	-	
2,573	Mud Transferred Out			154	2,419																	
2,515	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,515	
-	Mud Recovered																					
2,460	Comments:								Comments:							Comments:						
	10/5/21 Received 2594bbls from Rommel pad.								10/12/21							10/19/21 Lost 325bbls to mud on cuttings while drilling.						
	10/6/21 No losses.								10/13/21							10/20/21 Lost 10bbls to mud on cuttings while drilling and circulating clean up cycles.						
	10/7/21 No losses.								10/14/21							10/21/21						
	10/8/21 Lost 26bbls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bbls OBM to the HO4 leaving 280bbls in casing on HO2.								10/15/21							10/22/21						
	10/9/21								10/16/21							10/23/21 107 bbls of kill mud rec from mud plant. 157 BBLS lost to seepage.						
	10/10/21								10/17/21 Transferred 2047bbls OBM from the HO4 to the HO2. 280bbls already pre-loaded in casing from surface interval.							10/24/21						
10/11/21								10/18/21 Lost 262bbls to mud on cuttings while drilling.							10/25/21							

10/24/21

110 Old Market St.
St Martinville, LA 70582

Report #12

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

86.6° 10,281' TVD

Operator				Contractor			County / Parish / Block		Engineer Start Date		24 hr fig.		Drilled Depth			
MAGNOLIA OIL & GAS				PATTERSON			WASHINGTON		10/04/21		3,631 ft		14,145 ft			
Well Name and No.				Rig Name and No.			State		Spud Date		Current ROP		Activity			
BIGHORN PLAINS H02 BH				248			TEXAS		10/06/21		228 ft/hr		DRILLING			
Report for				Report for			Field / OCS-G #		Fluid Type		Circulating Rate		Circulating Pressure			
Brandon Parks / Jim Harrison				Tool Pusher			GIDDINGS		OBM		357 gpm		3,673 psi			
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)		PUMP #1		PUMP #2		RISER BOOSTER			
Weight	PV	YP	E.S.	CaCl2	GELS	HTHP	In Pits	606 bbl	Liner Size	4.75	Liner Size	4.75	Liner Size			
15-17	20-40	8-20	>500	±275K	<10 <15	<6	In Hole	578 bbl	Stroke	12	Stroke	12	Stroke			
				10/24/21		10/23/21	Active	1184 bbl	bbl/stk	0.0625	bbl/stk	0.0625	bbl/stk	0.0000		
Time Sample Taken				0:30		13:00	Storage	1632 bbl	stk/min	68	stk/min	68	stk/min			
Sample Location				pit		shaker	Tot. on Location	2816 bbl	gal/min	178	gal/min	178	gal/min	0		
Flowline Temperature °F				135 °F		135 °F	PHHP = 765 CIRCULATION DATA n = 0.705 K = 170.111									
Depth (ft)				10,861'		12,941'	Bit Depth = 14,145 '			Washout = 5%		Pump Efficiency = 95%				
Mud Weight (ppg)				9.1		9.1	Drill String Disp.	Volume to Bit	200.2 bbl	Strokes To Bit		3,205	Time To Bit 24 min			
Funnel Vis (sec/qt) @ 125 °F				54		51		Bottoms Up Vol.	377.5 bbl	BottomsUp Stks		6,044	BottomsUp Time 44 min			
600 rpm				44		47		79.0 bbl	Riser Ann. Vol.	-2.1 bbl	Riser Strokes		-34	Riser Circ. Time 0 min		
300 rpm				27		29	DRILLING ASSEMBLY DATA					SOLIDS CONTROL				
200 rpm				17		20	Tubulars	OD (in.)	ID (in.)	Length	Top	Unit	Screens	Hours		
100 rpm				13		15	Drill Pipe	4.500	3.826	14,012'	0'	Shaker 1	200			
6 rpm				7		7	Dir. BHA	5.250	2.688	133'	14,012'	Shaker 2	200			
3 rpm				6		6	Collars				14,145'	Shaker 3	200			
Plastic Viscosity (cp) @ 150 °F				17		18	Collars				14,145'	Desander				
Yield Point (lb/100 ft²) T0 = 5				10		11	CASING & HOLE DATA					Desilter				
Gel Strength (lb/100 ft²) 10 sec/10 min				6/9		7/9	Casing	OD (in.)	ID (in.)	Depth	Top	Centrifuge 1				
Gel Strength (lb/100 ft²) 30 min				12		11	Riser	20		108'		VOLUME ACCOUNTING (bbls)				
HTHP Filtrate (cm/30 min) @ 300 °F				6.4		6.4	Surface	10 3/4	9.950	3,020'	108'	Prev. Total on Location	2515.3			
HTHP Cake Thickness (32nds)				2.0		2.0	Int. Csg.	7 5/8	6.875	9,920'	108'	Transferred In(+)/Out(-)	429.0			
Retort Solids Content				10%		10%	Washout 1					Oil Added (+)	156.1			
Corrected Solids (vol%)				7.7%		7.7%	Washout 2					Barite Added (+)	0.0			
Retort Oil Content				67.5%		67%	Open Hole Size 7.088 14,145'					Other Product Usage (+)	17.7			
Retort Water Content				22.5%		23%	ANNULAR GEOMETRY & RHEOLOGY					Water Added (+)	60.0			
O/W Ratio				75:25		74:26	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-)	-221.5			
Whole Mud Chlorides (mg/L)				55,500		57,000						Non-Recoverable Vol. (-)	-40.0			
Water Phase Salinity (ppm)				278,912		279,856	0x4.5	108'	-431.9		9.32	Lost Returns (-)	-100.9			
Whole Mud Alkalinity, Pom				1.8		2.1	6.875x4.5	9,920'	323.7	turb	10.10	Est. Total on Location	2815.7			
Excess Lime (lb/bbl)				2.3 ppb		2.7 ppb	7.088x4.5	14,012'	291.6	turb	10.49	Est. Losses/Gains (-)/(+)	0.0			
Electrical Stability (volts)				480 v		489 v	7.088x5.25	14,145'	385.6	turb	10.73	BIT HYDRAULICS DATA				
Average Specific Gravity of Solids				2.75		2.72						Bit H.S.I.	Bit ΔP	Nozzles (32nds)		
Percent Low Gravity Solids				6%		6.1%						0.28	48 psi	18	18	18
ppb Low Gravity Solids				49 ppb		50 ppb						Bit Impact Force	Nozzle Velocity (ft/sec)	18	18	18
Percent Barite				1.8%		1.6%										
ppb Barite				25 ppb		23 ppb	BIT DATA		Manuf./Type HALLIBURTON PDC			129 lbs	77			
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	M Washburn	6 3/4	9,928 ft	38.0	4,564 ft	120.1	3,473 psi	5,094 psi			
Remarks/Recommendations:							Rig Activity:									
OBM RECEIVED: 2249bbls							Continue drilling 6-3/4" hole section. Encountered seepage losses at 10650, reduce mud wt from 9.1 to 9.0, pump LCM sweeps, losses stopped, drill to 12350 increase mud wt to 9.1 while pumping LCM sweep with Procor additives, no mud losses since initial seepage. Continue to maintain 9.1 currently drilling at 14,145 MD, samples are 100% AC, rotating ROP 160 FPH, torque 10-11K, MWD TEMP 266. Max gas 2938 units.									
PLAN FORWARD: Drill curve & Lateral																
Adding gels to increase rheology																
Maintaining MW at 9.1 ppg in active.																
Eng. 1: Mike Washburn		Eng. 2: Chris Beasley		WH 1: MIDLAND		WH 2: WH #2		Rig Phone:		Daily Total		Cumulative Cost				
Phone: 361-945-5777		Phone: 903-747-5377		Phone: 432-686-7361		Phone: -				\$6,938.55		\$66,483.48				
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							
									\$24,958.55			\$182,053.88				

THIRD PARTY COST SHEET

[illegible]

OUTSOURCE FLUID SOLUTIONS LLC.

FLUID
VOLUME
ACCOUNTING

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

	Date	WEEK 1							WEEK 2							WEEK 3							
		10/5/21	10/6/21	10/7/21	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	
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	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	6 3/4	6 3/4	6 3/4	6 3/4		
	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	6,980	9,928	9,928	9,928	10,861	14,145	
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145		
11,125	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	88	-	-	933	3,284	-	
841	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	8	-	-	41	145	-	
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	
65	Chemical Additions														8	31				8	18		
1,026	Base Fluid Added														322	209	128	46	80	85	156		
41	Barite Increase															14	7			20			
2,439	Weighted Mud Added			285										2,047						107			
429	Slurry Added																				429		
129	Water Added														3	23		14		29	60		
-	Added for Washout																						
4,129	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	135	60	80	249	663	-
-	Surface Losses																						
258	Formation Loss																			158	100		
887	Mud Loss to Cuttings														262	325	10			68	222		
97	Unrecoverable Volume				26													35		20	16		
92	Centrifuge Losses																	18	30	20	24		
1,334	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	10	53	30	266	362	-	
2,573	Mud Transferred Out			154	2,419																		
2,816	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	2,816	
-	Mud Recovered																						
2,889	Comments:								Comments:							Comments:							
	10/5/21	Received 2594bls from Rommel pad.							10/12/21							10/19/21 Lost 325bls to mud on cuttings while drilling.							
	10/6/21	No losses.							10/13/21							10/20/21 Lost 10bls to mud on cuttings while drilling and circulating clean up cycles.							
	10/7/21	No losses.							10/14/21							10/21/21							
	10/8/21	Lost 26bls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bls OBM to the HO4 leaving 280bls in casing on HO2.							10/15/21							10/22/21							
	10/9/21								10/16/21							10/23/21 107 bbls of kill mud rec from mud plant. 157 BBLS lost to seepage.							
	10/10/21								10/17/21 Transferred 2047bls OBM from the HO4 to the HO2. 280bls already pre-loaded in casing from surface interval.							10/24/21 Rec 429 BBLS of 9.0 OBM from mud plant							
	10/11/21								10/18/21 Lost 262bls to mud on cuttings while drilling.							10/25/21							

10/25/21

110 Old Market St.
St Martinville, LA 70582

Report #13

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

86.7° 10,437' TVD

Operator MAGNOLIA OIL & GAS							Contractor PATTERSON			County / Parish / Block WASHINGTON			Engineer Start Date 10/04/21			24 hr fig. 2,541 ft			Drilled Depth 16,686 ft															
Well Name and No. BIGHORN PLAINS H02 BH							Rig Name and No. 248			State TEXAS			Spud Date 10/06/21			Current ROP 175 ft/hr			Activity DRILLING															
Report for Brandon Parks / Jim Harrison							Report for Tool Pusher			Field / OCS-G # GIDDINGS			Fluid Type WBM			Circulating Rate 352 gpm			Circulating Pressure 3,442 psi															
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																		
Weight 8.4-9.6		PV 0-10		YP 0-10		GELS <5 <10		pH 6-9		API fl <25		% Solids 2-10		In Pits 424 bbl		Liner Size 4.75		Liner Size 4.75		Liner Size														
														In Hole 657 bbl		Stroke 12		Stroke 12		Stroke														
														Active 1081 bbl		bbl/stk 0.0625		bbl/stk 0.0625		bbl/stk 0.0000														
														Storage <u>2075 bbl</u>		stk/min 66		stk/min 68		stk/min														
														Tot. on Location 3156 bbl		gal/min 173		gal/min 178		gal/min 0														
Flowline Temperature °F													PHHP = 706 CIRCULATION DATA n = 0.737 K = 15.441																					
Depth (ft)							16,686'						Bit Depth = 16,686 '			Washout = 0%			Pump Efficiency = 95%															
Mud Weight (ppg)							8.5						Drill String Disp.		Volume to Bit 236.3 bbl		Strokes To Bit 3,783		Time To Bit 28 min															
Funnel Vis (sec/qt) @ 90 °F							28								Bottoms Up Vol. 420.8 bbl		BottomsUp Stks 6,737		BottomsUp Time 50 min															
600 rpm							5						92.9 bbl		Riser Ann. Vol. -2.1 bbl		Riser Strokes -34		Riser Circ. Time 0 min															
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 16,553' 0'					Shaker 1 200																
6 rpm							1						Dir. BHA 5.250 2.688 133' 16,553'					Shaker 2 200																
3 rpm							1						Collars 16,686'					Shaker 3 200																
Plastic Viscosity (cp) @ 120 °F							2						Collars 16,686'					Desander																
Yield Point (lb/100 ft²) T0 = 1							1											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 3,020' 108'					Prev. Total on Location 2815.7																
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 7 5/8 6.875 9,920' 108'					Transferred In(+)/Out(-)																
Retort Solids Content							0.8%						Washout 1					Oil Added (+) 202.7																
Retort Oil Content													Washout 2					Barite Added (+) 13.9																
Retort Water Content							99.2%						Open Hole Size 6.750 16,686'					Other Product Usage (+) 8.1																
Sand Content							0.2%						ANNULAR GEOMETRY & RHEOLOGY					Water Added (+) 657.0																
M.B.T. (Methylene Blue Capacity) (ppb)													annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal													
pH							7.0											Left on Cuttings (-) -56.2																
Alkalinity, Mud Pm							0.1						0x4.5 108' -425.5 8.60					Non-Recoverable Vol. (-) -40.0																
Alkalinities, Filtrate Pf/Mf													6.875x4.5 9,920' 318.9 turb 9.06					Lost Returns (-) -445.1																
Chlorides (mg/L)							650						6.75x4.5 16,553' 340.4 turb 9.55					Est. Total on Location 3156.1																
Calcium (ppm)							240						6.75x5.25 16,686' 478.7 turb 9.78					Est. Losses/Gains (-)/(+) 0.0																
Excess Lime (lb/bbl)																		BIT HYDRAULICS DATA																
Average Specific Gravity of Solids							2.60		2.60		2.60							Bit H.S.I.		Bit ΔP		Nozzles (32nds)												
Percent Low Gravity Solids							0.7%											0.25		43 psi		18 18 18												
Percent Drill Solids							0.7%											Bit Impact Force		Nozzle Velocity (ft/sec)		18 18 18												
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA			Manuf./Type HALLIBURTON PDC			116 lbs		76													
Estimated Total LCM in System ppb													Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure									
Sample Taken By							C Beasley				M Washburn		6 3/4		9,928 ft		62.0		7,105 ft		114.6		3,439 psi		4,552 psi									
Remarks/Recommendations: OBM RECEIVED: 2249bbls PLAN FORWARD: Drill curve & Lateral Drilling with water, pumping high vis sweeps. 2499 BBLS of OBM on location currently.										Rig Activity: Continue drilling 6-3/4" hole section, encounter water influx since AM report, water % in retort has increased from 22% to 42% in 12 hours rate of water influx up to 25 bbls /hr . Source of water is believed to be from nearby fracking operations. Adding diesel, emulsifiers, wetting agents, Lime and CACL2 to maintain properties and concentrations. Transferred 600 bbls out of active system and replaced with an equal amount or volume from storage. Ordered additional chemicals from Newpark Madisonville. samples are 100% AC, MWD TEMP 230. Shut in well monitoring casing pressure 849 psi. Pumped approx 86 BBLS of 17# kill mud down kill side until psi went to 0 psi. Pumping water out of tank 8 (slug pit). Drilled to 16,686' with no returns. Contaminated mud stored in Frac Tanks 5 and 6 containing 884 BBLS. Active Tank 7 contains sweep consisting of water contaminated OBM. Tank 5 & 6																								
Eng. 1: Mike Washburn Phone: 361-945-5777							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 1 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.																	\$16,901.96		\$83,385.44								
										INCLUDING 3RD PARTY CHARGES													\$46,038.67		\$228,092.55									

THIRD PARTY COST SHEET

[illegible]

OUTSOURCE FLUID SOLUTIONS LLC.

FLUID
VOLUME
ACCOUNTING

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

	Date	WEEK 1							WEEK 2							WEEK 3							
		10/5/21	10/6/21	10/7/21	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	
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	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	6 3/4	6 3/4	6 3/4	6 3/4		
	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145	
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145	16,686	
13,666	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	88	-	-	933	3,284	2,541	
954	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	8	-	-	41	145	112	
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	
73	Chemical Additions														8	31				8	18		
1,229	Base Fluid Added														322	209	128	46	80	85	156		
55	Barite Increase															14	7			20			
2,439	Weighted Mud Added			285										2,047						107			
429	Slurry Added																				429		
129	Water Added														3	23		14		29	60		
-	Added for Washout																						
4,354	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	135	60	80	249	663	-
-	Surface Losses																						
703	Formation Loss																			158	100		
944	Mud Loss to Cuttings														262	325	10			68	222		
117	Unrecoverable Volume				26													35		20	16		
112	Centrifuge Losses																	18	30	20	24		
1,876	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	10	53	30	266	362	-	
2,573	Mud Transferred Out			154	2,419																		
2,499	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	2,816	
-	Mud Recovered																						
2,889	Comments:								Comments:							Comments:							
	10/5/21	Received 2594bbls from Rommel pad.							10/12/21							10/19/21 Lost 325bbls to mud on cuttings while drilling.							
	10/6/21	No losses.							10/13/21							10/20/21 Lost 10bbls to mud on cuttings while drilling and circulating clean up cycles.							
	10/7/21	No losses.							10/14/21							10/21/21							
	10/8/21	Lost 26bbls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bbls OBM to the HO4 leaving 280bbls in casing on HO2.							10/15/21							10/22/21							
	10/9/21								10/16/21							10/23/21 107 bbls of kill mud rec from mud plant. 157 BBLS lost to seepage.							
	10/10/21								10/17/21 Transferred 2047bbls OBM from the HO4 to the HO2. 280bbls already pre-loaded in casing from surface interval.							10/24/21 Rec 429 BBLS of 9.0 OBM from mud plant							
	10/11/21								10/18/21 Lost 262bbls to mud on cuttings while drilling.							10/25/21							

10/26/21

110 Old Market St.
St Martinville, LA 70582

Report #14

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

1.0°

739' TVD

Operator MAGNOLIA OIL & GAS							Contractor PATTERSON			County / Parish / Block WASHINGTON			Engineer Start Date 10/04/21		24 hr fig. 403 ft		Drilled Depth 17,089 ft																							
Well Name and No. BIGHORN PLAINS H02 BH							Rig Name and No. 248			State TEXAS			Spud Date 10/06/21		Current ROP 0 ft/hr		Activity TIH																							
Report for Brandon Parks / Jim Harrison							Report for Tool Pusher			Field / OCS-G # GIDDINGS			Fluid Type WBM		Circulating Rate 0 gpm		Circulating Pressure psi																							
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																								
Weight 8.4-9.6		PV 0-10		YP 0-10		GELS <5 <10		pH 6-9		API fl <25		% Solids 2-10		In Pits 484 bbl		Liner Size 4.75		Liner Size 4.75		Liner Size																				
														In Hole 762 bbl		Stroke 12		Stroke 12		Stroke																				
						10/26/21						10/25/21		Active 507 bbl		bbl/stk 0.0625		bbl/stk 0.0625		bbl/stk 0.0000																				
														Storage <u>1923 bbl</u>		stk/min		stk/min		stk/min																				
						Sample Location		Slug Pit				Slug Pit		Tot. on Location 3169 bbl		gal/min 0		gal/min 0		gal/min 0																				
Flowline Temperature °F													PHHP = 0 CIRCULATION DATA n = 0.737 K = 15.441																											
Depth (ft)							17,089'				17,088'		Bit Depth = 740 '			Washout = 0%			Pump Efficiency = 95%																					
Mud Weight (ppg)							8.3				8.3		Drill String Disp.		Volume to Bit 9.6 bbl		Strokes To Bit			Time To Bit																				
Funnel Vis (sec/qt)							@ 90 °F		27				27		Bottoms Up Vol. 13.5 bbl		BottomsUp Stks			BottomsUp Time																				
600 rpm							5				5		5.9 bbl		Riser Ann. Vol. -2.1 bbl		Riser Strokes			Riser Circ. Time																				
300 rpm							3				3		DRILLING ASSEMBLY DATA							SOLIDS CONTROL																				
200 rpm							2				2		Tubulars		OD (in.)		ID (in.)		Length		Top		Unit		Screens		Hours													
100 rpm							1				1		Drill Pipe		4.500		3.826		607'		0'		Shaker 1		200															
6 rpm							1				1		Dir. BHA		5.250		2.688		133'		607'		Shaker 2		200															
3 rpm							1						Collars						740'				Shaker 3		200															
Plastic Viscosity (cp)							@ 120 °F		2				2		Collars				740'				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		3,020'		108'		Prev. Total on Location		3156.1													
HTHP Filtrate / Cake Thickness							@ 0 °F								Int. Csg.		7 5/8		6.875		9,920'		108'		Transferred In(+)/Out(-)		51.0													
Retort Solids Content							0.1%						0.1%		Washout 1										Oil Added (+)		1.3													
Retort Oil Content															Washout 2										Barite Added (+)		21.0													
Retort Water Content							99.9%						99.9%		Open Hole Size		6.750		17,089'						Other Product Usage (+)		0.0													
Sand Content							0.2%						0%		ANNULAR GEOMETRY & RHEOLOGY											Water Added (+)		124.4												
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						7.0		0x4.5		108'		0.0		8.30				Non-Recoverable Vol. (-)															
Alkalinity, Mud Pm							0.1						0.1		6.875x4.5		607'		0.0		lam		8.30		Lost Returns (-)		-185.0													
Alkalinities, Filtrate Pf/Mf															6.875x5.25		740'		0.0		lam		8.30		Est. Total on Location		3168.8													
Chlorides (mg/L)							550						550												Est. Losses/Gains (-)/(+)		0.0													
Calcium (ppm)							180						180												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%						0%												Bit Impact Force		Nozzle Velocity (ft/sec)		18		18		18							
Percent Drill Solids																																								
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							C Beasley				M Washburn				6 3/4		17,089 ft		0.0		0 ft		#DIV/0!		psi															
Remarks/Recommendations: OBM RECEIVED: 2729 bls PLAN FORWARD: Drill Lateral Drilling with water, pumping high vis sweeps. 2407 BBLS of OBM on location currently.										Rig Activity: Drill 6-3/4" hole to 17088 with no returns on mud cap, reduction in ROP, pull out of hole to inspect bit and BHA. Wash and back ream up to 10744 circulating drill water down DP. At 10744 start pulling out conventionaly filling casing with calculated pipe displacement using 10.0# high water content OBM from storage. POOH and LD BHA. P/U new BHA with bit passing 740'.																														
Eng. 1: Mike Washburn Phone: 361-945-5777							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 0 1 1 1 1 1 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.																		21,080.50							104,465.94								
										INCLUDING 3RD PARTY CHARGES										21,080.50							249,173.05													

THIRD PARTY COST SHEET

[illegible]

OUTSOURCE FLUID SOLUTIONS LLC.

FLUID
VOLUME
ACCOUNTING

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

	Date	WEEK 1							WEEK 2							WEEK 3							
		10/5/21	10/6/21	10/7/21	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	
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	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	6 3/4	6 3/4	6 3/4	6 3/4		
	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145	
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145	16,686	
14,069	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	88	-	-	933	3,284	2,541	
971	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	8	-	-	41	145	112	
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	
84	Chemical Additions														8	31				8	18	18	
1,229	Base Fluid Added														322	209	128	46	80	85	156	203	
76	Barite Increase															14	7			20		14	
2,490	Weighted Mud Added			285										2,047						107			
429	Slurry Added																				429		
149	Water Added														3	23		14		29	60		
-	Added for Washout																						
4,457	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	135	60	80	249	663	235
-	Surface Losses																						
888	Formation Loss																			158	100	445	
944	Mud Loss to Cuttings														262	325	10			68	222	57	
122	Unrecoverable Volume				26													35		20	16	25	
117	Centrifuge Losses																	18	30	20	24	25	
2,071	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	10	53	30	266	362	552	
2,573	Mud Transferred Out			154	2,419																		
2,407	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	2,499	
-	Mud Recovered																						
2,940	Comments:								Comments:							Comments:							
	10/5/21	Received 2594bbls from Rommel pad.							10/12/21							10/19/21 Lost 325bbls to mud on cuttings while drilling.							
	10/6/21	No losses.							10/13/21							10/20/21 Lost 10bbls to mud on cuttings while drilling and circulating clean up cycles.							
	10/7/21	No losses.							10/14/21							10/21/21							
	10/8/21	Lost 26bbls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bbls OBM to the HO4 leaving 280bbls in casing on HO2.							10/15/21							10/22/21							
	10/9/21								10/16/21							10/23/21 107 bbls of kill mud rec from mud plant. 157 BBLS lost to seepage.							
	10/10/21								10/17/21 Transferred 2047bbls OBM from the HO4 to the HO2. 280bbls already pre-loaded in casing from surface interval.							10/24/21 Rec 429 BBLS of 9.0 OBM from mud plant							
10/11/21								10/18/21 Lost 262bbls to mud on cuttings while drilling.							10/25/21 rec 51 BBLS of 17.5 from mud plant								

10/27/21

110 Old Market St.
St Martinville, LA 70582

Report #15

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

86.7° 10,496' TVD

Operator				Contractor				County / Parish / Block				Engineer Start Date				24 hr fig.				Drilled Depth													
MAGNOLIA OIL & GAS								PATTERSON				WASHINGTON				10/04/21				618 ft				17,707 ft									
Well Name and No.								Rig Name and No.				State				Spud Date				Current ROP				Activity									
BIGHORN PLAINS H02 BH								248				TEXAS				10/06/21				165 ft/hr				Drilling									
Report for								Report for				Field / OCS-G #				Fluid Type				Circulating Rate				Circulating Pressure									
Brandon Parks / Jim Harrison								Tool Pusher				GIDDINGS				WBM				352 gpm				3,362 psi									
MUD PROPERTY SPECIFICATIONS								MUD VOLUME (BBL)				PUMP #1				PUMP #2				RISER BOOSTER													
Weight		PV		YP		GELS		pH		API fl		% Solids		In Pits		532 bbl		Liner Size		4.75		Liner Size		4.75		Liner Size							
8.4-9.6		0-10		0-10		<5 <10		6-9		<25		2-10		In Hole		697 bbl		Stroke		12		Stroke		12		Stroke							
								10/27/21				10/26/21		Active		1229 bbl		bbl/stk		0.0625		bbl/stk		0.0625		bbl/stk		0.0000					
Time Sample Taken								0:30				14:00		Storage		1807 bbl		stk/min		66		stk/min		68		stk/min							
Sample Location								Slug Pit				Slug Pit		Tot. on Location		3036 bbl		gal/min		173		gal/min		178		gal/min		0					
Flowline Temperature °F														PHHP = 690 CIRCULATION DATA n = 0.737 K = 15.441																			
Depth (ft)								17,707'				17,088'		Bit Depth = 17,707 '				Washout = 0%				Pump Efficiency = 95%											
Mud Weight (ppg)								8.3				8.3		Drill String Disp.		Volume to Bit		250.8 bbl		Strokes To Bit		4,016		Time To Bit				30 min					
Funnel Vis (sec/qt)								@ 90 °F		27				27		Bottoms Up Vol.		445.9 bbl		BottomsUp Stks		7,138		BottomsUp Time				53 min					
600 rpm								5				5		98.4 bbl		Riser Ann. Vol.		-2.1 bbl		Riser Strokes		-34		Riser Circ. Time				0 min					
300 rpm								3				3		DRILLING ASSEMBLY DATA								SOLIDS CONTROL											
200 rpm								2				2		Tubulars		OD (in.)		ID (in.)		Length		Top		Unit		Screens		Hours					
100 rpm								1				1		Drill Pipe		4.500		3.826		17,574'		0'		Shaker 1		200							
6 rpm								1				1		Dir. BHA		5.250		2.688		133'		17,574'		Shaker 2		200							
3 rpm								1						Collars						17,707'				Shaker 3		200							
Plastic Viscosity (cp)								@ 120 °F		2				2		Collars				17,707'				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 (bbbls)							
API Filtrate / Cake Thickness														Surface		10 3/4		9.950		3,020'		108'		Prev. Total on Location				3168.9					
HTHP Filtrate / Cake Thickness								@ 0 °F						Int. Csg.		7 5/8		6.875		9,920'		108'		Transferred In(+)/Out(-)				156.0					
Retort Solids Content								0.1%				0.1%		Washout 1								Oil Added (+)				79.5							
Retort Oil Content														Washout 2								Barite Added (+)				20.9							
Retort Water Content								99.9%				99.9%		Open Hole Size				6.750		17,707'				Other Product Usage (+)				0.6					
Sand Content								0.2%				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		Left on Cuttings (-)				0.0					
pH								7.2				7.0												Non-Recoverable Vol. (-)				-144.2					
Alkalinity, Mud Pm								0.1				0.1		0x4.5		108'		-425.5		8.44				Lost Returns (-)				-246.0					
Alkalinities, Filtrate Pf/Mf														6.875x4.5		9,920'		318.9		turb		8.90		Est. Total on Location				3035.8					
Chlorides (mg/L)								600				550		6.75x4.5		17,574'		340.4		turb		9.42		Est. Losses/Gains (-)/(+)				0.0					
Calcium (ppm)								180				180		6.75x5.25		17,707'		478.7		turb		9.63		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												0.24		42 psi		18 18 18					
Percent Low Gravity Solids								0%				0%												Bit Impact Force		Nozzle Velocity (ft/sec)		18 18 18					
Percent Drill Solids																																	
PPA Spurt / Total (ml) @								@ 0 °F								BIT DATA		Manuf./Type HALLIBURTON PDC				114 lbs		76									
Estimated Total LCM in System								ppb						Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure							
Sample Taken By								C Beasley				M Washburn		6 3/4		17,089 ft		8.0		618 ft		77.3		3,362 psi		4,526 psi							
Remarks/Recommendations:												Rig Activity:																					
OBM RECEIVED: 2885 bls												Trip in hole with BHA #4 to 2895 casing pressure 268 PSI, pump 135 bbbls Of 16.6 kill mud down annulus, well static, continue to trip in hole to 15850, encounter tight hole conditions, begin circulating water, wash and ream to 16859, on mud cap, attempting to ream through tight hard section at 16873. Drilled to 17,707'. 71 BBLS of 16.5 PPG kill mud was used to reduce casing psi to 0 @ 17,502'. Adding PHPA to drill water to aid in hole cleaning, periodically pumping 10 - 20 bbbls OBM sweep with high water content OBM. Receiving additional OBM from Newpark Madisonville WH.																					
PLAN FORWARD: Drill Lateral																																	
Drilling with water, pumping high vis sweeps.																																	
2339 BBLS of OBM on location currently.																																	
Eng. 1: Mike Washburn				Eng. 2: Chris Beasley				WH 1: MIDLAND				WH 2: WH #2				Rig Phone:				Daily Total				Cumulative Cost									
Phone: 361-945-5777				Phone: 903-747-5377				Phone: 432-686-7361				Phone: -								\$22,137.85				\$126,603.79									
W	P	Y	g	G	p	A	S	C	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.													\$22,137.85				\$126,603.79							
0	1	1	1	1	1	1	0	0														INCLUDING 3RD PARTY CHARGES				\$30,955.75				\$280,128.80			

MATERIAL CONSUMPTION

Date	Operator	Well Name and No.			Rig Name and No.		Report No.		
10/27/21	MAGNOLIA OIL & GAS	BIGHORN PLAINS H02 BH			248		Report #15		
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			42	\$1,967.28
PHPA LIQUID (pail)	5 gal	\$41.36	25		20	5	\$206.80	9	\$372.24
EVO-LUBE	gal	\$14.00							
NEW GEL (PREMIUM)	100# sk	\$11.54							
ALUMINUM TRISTEARATE	25# sk	\$81.16							
CACL2 (50)	50# sk	\$14.32	176		176			272	\$3,895.04
LIME (50)	50# sk	\$5.88	300		300			398	\$2,340.24
OPTI - G	50# sk	\$32.44	120		120			120	\$3,892.80
BENTONE 38 (50)	50# sk	\$152.93	54		54			14	\$2,141.02
BENTONE 910 (50)	50# sk	\$55.55	55		55			20	\$1,111.00
BENTONE 990 (50)	50# sk	\$88.61	70		70			26	\$2,303.86
OPTI - MUL	gal	\$11.40	1100		1100			825	\$9,405.00
OPTI - WET	gal	\$8.84	715		605	110	\$972.40	825	\$7,293.00
NEW PHALT	50# sk	\$38.72	80		80			78	\$3,020.16
OIL SORB (25)	25# sk	\$4.75	47		47				
OPTIPLUS GAL	gal	\$48.40	1100		1100				
NEW CARB (M)	50# sk	\$5.63	137		137			10	\$56.30
CYBERSEAL	25# sk	\$24.40							
MAGMAFIBER F (25)	25# sk	\$28.05	210		210			30	\$841.50
MAGMAFIBER R (30)	30# sk	\$28.05							
VARISEAL	50# sk	\$26.50							
FIBER PLUG									
NUT PLUG M (50)	50# sk	\$10.51	40		40				
MICA F (50)	50# sk	\$10.38	40		40				
GRAPHITE POWDER F (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	401	1400	301	\$2,459.17	1403	\$11,462.51
OPTI DRILL (OBM)	bbl	\$75.00	2450	156	2400	206	\$15,450.00	485	\$36,375.00
Magnolia owned mud	bbl							387	
DISCOUNTED OBM	bbl	\$15.00							
ENGINEERING (24 HR)	each	\$990.00				2	\$1,980.00	30	\$29,700.00
ENGINEERING (DIEM)	bbl	\$30.00				2	\$60.00	30	\$900.00
ENGINEERING (MILES)	each	\$1.00						1023	\$1,023.00
FORKLIFT WITH OPERATOR	each	\$156.25						1	\$156.25
Scale Ticket	each	\$15.00				1	\$15.00	5	\$75.00
TRUCKING (cwt)	each	\$2.48				401	\$994.48	2675	\$6,635.09
TRUCKING (min)	each	\$812.50						1	\$812.50
PALLETS (ea)	each	\$12.50						31	\$387.50
SHRINK WRAP (ea)	each	\$12.50						35	\$437.50
		Daily Sub-Total \$22,137.85			Cumulative Total \$126,603.79			\$126,603.79	

THIRD PARTY COST SHEET

[illegible]

FLUID VOLUME ACCOUNTING

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

3,096

THIRD PARTY COST SHEET

[illegible]

OUTSOURCE FLUID SOLUTIONS LLC.

FLUID
VOLUME
ACCOUNTING

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

	Date	WEEK 1							WEEK 2							WEEK 3						
		10/5/21	10/6/21	10/7/21	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
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Bit Size		13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	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	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4
Grand Totals	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145	16,686
15,909	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	88	-	-	933	3,284	2,541
1,053	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	8	-	-	41	145	112
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816
85	Chemical Additions														8	31				8	18	18
1,271	Base Fluid Added														322	209	128	46	80	85	156	203
104	Barite Increase															14	7			20		14
3,281	Weighted Mud Added			285										2,047						107		
429	Slurry Added																				429	
161	Water Added														3	23		14		29	60	
-	Added for Washout																					
5,331	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	135	60	80	249	663
-	Surface Losses																					
1,996	Formation Loss																			158	100	445
944	Mud Loss to Cuttings														262	325	10			68	222	57
122	Unrecoverable Volume				26													35		20	16	25
117	Centrifuge Losses																	18	30	20	24	25
3,179	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	10	53	30	266	362	552
2,573	Mud Transferred Out			154	2,419																	
2,173	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	2,499
-	Mud Recovered																					
3,731	Comments:								Comments:							Comments:						
	10/5/21	Received 2594bbls from Rommel pad.							10/12/21							10/19/21	Lost 325bbls to mud on cuttings while drilling.					
	10/6/21	No losses.							10/13/21							10/20/21	Lost 10bbls to mud on cuttings while drilling and circulating clean up cycles.					
	10/7/21	No losses.							10/14/21							10/21/21						
	10/8/21	Lost 26bbls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bbls OBM to the HO4 leaving 280bbls in casing on HO2.							10/15/21							10/22/21						
	10/9/21								10/16/21							10/23/21	107 bbls of kill mud rec from mud plant. 157 BBLS lost to seepage.					
	10/10/21								10/17/21	Transferred 2047bbls OBM from the HO4 to the HO2. 280bbls already pre-loaded in casing from surface interval.						10/24/21	Rec 429 BBLS of 9.0 OBM from mud plant					
	10/11/21								10/18/21	Lost 262bbls to mud on cuttings while drilling.						10/25/21	rec 51 BBLS of 17.5 from mud plant					

THIRD PARTY COST SHEET

[illegible]

OUTSOURCE FLUID SOLUTIONS LLC.

FLUID VOLUME ACCOUNTING

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

		WEEK 1							WEEK 2							WEEK 3							
		Date	10/5/21	10/6/21	10/7/21	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
		Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	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	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4	
	Starting Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145	
	Ending Depth	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	6,980	9,840	9,928	9,928	9,928	10,861	14,145	16,686
15,909	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	3,960	2,860	88	-	-	933	3,284	2,541	
1,053	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	375	271	8	-	-	41	145	112	
	Starting System Volume	2,594	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	
85	Chemical Additions														8	31				8	18	18	
1,271	Base Fluid Added														322	209	128	46	80	85	156	203	
104	Barite Increase															14	7			20		14	
3,619	Weighted Mud Added			285										2,047						107			
429	Slurry Added																				429		
161	Water Added														3	23		14		29	60		
-	Added for Washout																						
5,669	Total Additions	-	-	285	-	-	-	-	-	-	-	-	-	-	2,047	333	277	135	60	80	249	663	235
-	Surface Losses																						
2,578	Formation Loss																			158	100	445	
944	Mud Loss to Cuttings														262	325	10			68	222	57	
122	Unrecoverable Volume				26													35		20	16	25	
117	Centrifuge Losses																	18	30	20	24	25	
3,761	Total Losses	-	-	-	26	-	-	-	-	-	-	-	-	-	262	325	10	53	30	266	362	552	
2,573	Mud Transferred Out			154	2,419																		
1,929	Ending System Volume	2,594	2,594	2,725	280	280	280	280	280	280	280	280	280	2,327	2,398	2,350	2,475	2,482	2,532	2,515	2,816	2,499	
-	Mud Recovered																						
4,069	Comments:								Comments:							Comments:							
	10/5/21 Received 2594bls from Rommel pad.								10/12/21							10/19/21 Lost 325bls to mud on cuttings while drilling.							
	10/6/21 No losses.								10/13/21							10/20/21 Lost 10bls to mud on cuttings while drilling and circulating clean up cycles.							
	10/7/21 No losses.								10/14/21							10/21/21							
	10/8/21 Lost 26bls during transportation to/from mud plant and displacement of cement for surface casing. Transferred 2419bls OBM to the HO4 leaving 280bls in casing on HO2.								10/15/21							10/22/21							
	10/9/21								10/16/21							10/23/21 107 bbls of kill mud rec from mud plant. 157 BBLS lost to seepage.							
	10/10/21								10/17/21 Transferred 2047bls OBM from the HO4 to the HO2. 280bls already pre-loaded in casing from surface interval.							10/24/21 Rec 429 BBLS of 9.0 OBM from mud plant							
10/11/21								10/18/21 Lost 262bls to mud on cuttings while drilling.							10/25/21 rec 51 BBLS of 17.5 from mud plant								