

04/19/24

575 N Dairy Ashford, Suite 800
Houston, TX. 77079



Report #17

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90.2° 90.2 9,867' TVD
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Operator AVANT OPERATING LLC										Contractor HELMERICH & PAYNE, INC.							County / Parish / Block LEA COUNTY				Engineer Start Date 03/11/24			24 hr ftg. 1,811 ft		Drilled Depth 19,751 ft						
Well Name and No. CUTBOW 36 1 FEDERAL COM 501H										Rig Name and No. H&P 460							State NEW MEXICO				Spud Date 03/11/24			Current ROP 132 ft/hr		Activity Drilling						
Report for Derek, Mondo, Brandon, Dustin										Report for Cody, Ricky							Field / OCS-G # SEC 25 T19S R32E				Fluid Type AES VERT			Circulating Rate 722 gpm		Circulating Pressure 5,049 psi						
MUD PROPERTY SPECIFICATIONS														MUD VOLUME (BBL)				PUMP #1			PUMP #2			PUMP #3								
Weight 9-9.4		PV 12-20		YP 6-12		E.S. >300		CaCl2 ±200K		GELS <8 <8		HTHP <12		In Pits 425 bbl		Liner Size 5.5		Liner Size 5.5		Liner Size 5.5												
								4/19/24				4/18/24		In Hole 1329 bbl		Stroke 11		Stroke 11		Stroke 11												
														Active 1754 bbl		bbl/stk 0.0768		bbl/stk 0.0768		bbl/stk 0.0768												
Time Sample Taken						8:00						20:00		Storage <u>338 bbl</u>		stk/min 112		stk/min 112		stk/min 0												
Sample Location						suction						suction		Tot. on Location 2092 bbl		gal/min 361		gal/min 361		gal/min 0												
Flowline Temperature °F								104 °F				102 °F		PHHP = 2128 CIRCULATION DATA n = 0.678 K = 185.783																		
Depth (ft)								19,751'				18,800'		Bit Depth = 19,751 '			Washout = 0%			Pump Efficiency = 95%												
Mud Weight (ppg)								9.1				9.1		Drill String Disp.	Volume to Bit 436.5 bbl		Strokes To Bit 5,685		Time To Bit 25 min													
Funnel Vis (sec/qt)								@ 95 °F 63				57			Bottoms Up Vol. 893.0 bbl		BottomsUp Stks 11,632		BottomsUp Time 52 min													
600 rpm								40				35			146.3 bbl		TotalCirc.Vol. 1754.4 bbl		TotalCirc.Stks 22,853		Total Circ. Time 102 min											
300 rpm								25				22		DRILLING ASSEMBLY DATA								SOLIDS CONTROL										
200 rpm								20				18		Tubulars		OD (in.)		ID (in.)		Length		Top		Unit		Screens		Hours				
100 rpm								14				13		Drill Pipe		5.500		4.778		19,621'		0'		Shaker 1		4x200		24.0				
6 rpm								6				6		Hevi Wt		7.000		3.250		130'		19,621'		Shaker 2		4x200		24.0				
3 rpm								5				5		Collars								19,751'		Shaker 3		4x200		24.0				
Plastic Viscosity (cp)								@ 150 °F 15				13										19,751'		Centrifuge 1		7800		12.0				
Yield Point (lb/100 ft²)								T0 = 4		10				9		CASING & HOLE DATA								Centrifuge 2		7800		12.0				
Gel Strength (lb/100 ft²)								10 sec/10 min 7/8				6/7		Casing		OD (in.)		ID (in.)		Depth		Top		Dryer Shaker 3		4x80		24.0				
Gel Strength (lb/100 ft²)								30 min 9				8		Riser										VOLUME ACCOUNTING (bbls)								
HTHP Filtrate (cm/30 min)								@ 250 °F 9.8				10.2		Surface		13 3/8				2,978'		0'		Prev. Total on Location				2025.8				
HTHP Cake Thickness (32nds)								2.0				2.0		Int. Csg.		9 5/8		8.835		4,642'		0'		Transferred In(+)/Out(-)								
Retort Solids Content								10.2%				10.4%		Washout 1								0'		Oil Added (+)				146.8				
Corrected Solids (vol%)								8.8%				9.1%		Washout 2										Barite Added (+)				0.0				
Retort Oil Content								61.8%				62.6%		Open Hole Size		8.750		19,751'						Other Product Usage (+)				11.0				
Retort Water Content								28%				27%		ANNULAR GEOMETRY & RHEOLOGY								Water Added (+)				79.5						
O/W Ratio								69:31				70:30		annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal		Left on Cuttings (-)				-134.7				
Whole Mud Chlorides (mg/L)								38,000				36,000												Centrifuges (-)				-36.0				
Water Phase Salinity (ppm)								175,469				172,923												Lost Returns (-)								
Whole Mud Alkalinity, Pom								2.3				2.5		8.835x5.5		4,642'		370.3		turb		9.86		Est. Total on Location				2092.4				
Excess Lime (lb/bbl)								3 ppb				3.3 ppb		8.75x5.5		19,621'		382.2		turb		10.66		Est. Losses/Gains (-)/(+)				0.0				
Electrical Stability (volts)								333 v				321 v		8.75x7		19,751'		642.3		turb		10.81		BIT HYDRAULICS DATA								
Average Specific Gravity of Solids								2.65				2.64												Bit H.S.I.		Bit DP		Nozzles (32nds)				
Percent Low Gravity Solids								7.2%				7.5%												2.86		408 psi		15	15	15		
ppb Low Gravity Solids								59 ppb				61 ppb												Bit Impact Force		Nozzle Velocity (ft/sec)		15	15	15		
Percent Barite								1.6%				1.6%																				
ppb Barite								23 ppb				22 ppb		BIT DATA		Manuf./Type REED						762 lbs		224								
Estimated Total LCM in System ppb														Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure						
Sample Taken By								AC		0		AC		8 3/4		10,226 ft		97.0		9,525 ft		98.2		2,267 psi		5,049 psi						
Remarks/Recommendations: Maintain mud weight 8.9 - 9.2 ppg. Additions of lime to maintain Excess Lime. Additions of freshwater/Diesel to maintain OWR. Inspect/Wash screens every connection. Replace damaged. Additions of CACL2 to maintain WPS. Solids equipment: On														Rig Activity: Drilled from depth of 18,800' to 19,751' (WOB: 56, GPM: 725, SPP: 4,820, Diff: 680, RPM: 30, TQ: 32) without issue. Drilling ahead at the time of report. Treating the active system as we drill ahead. Pumping LCM sweeps as needed for seepage. Will continue to drill ahead in the lateral interval to TD at +/- 20,600'.																		
Eng. 1:		Ashley Camp				Eng. 2:		Mike Haynes				WH 1:		KERMIT				WH 2:		WH #1		Rig Phone:		Daily Total			Cumulative Cost					
Phone:		903-571-1759				Phone:		936-707-2988				Phone:		432-586-2812				Phone:		-				\$8,218.22			\$70,805.06					
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.															\$8,218.22			\$70,805.06					
1	1	1	1	0	1	2	1	1																INCLUDING 3RD PARTY CHARGES			\$8,218.22			\$70,805.06		



AES MATERIAL CONSUMPTION

Date	Operator			Well Name and No.			Rig Name and No.		Report No.
04/19/24	AVANT OPERATING LLC			CUTBOW 36 1 FEDERAL COM 501H			H&P 460		Report #17
DAILY USAGE & COST								CUMULATIVE	
Item	Unit	Unit Cost	Previous Inventory	Received	Closing Inventory	Daily Usage	Daily Cost		
275 GAL PLASTIC TOTE	gal	\$150.00	25		25				
AES MUL X (gal)	gal	\$13.71	1300		1250	50	\$685.50	500 \$6,855.00	
AES VIS III (50)	50# sk	\$128.37	37		24	13	\$1,668.81	53 \$6,803.61	
AES VIS LS (50)	50# sk	\$121.11	35		18	17	\$2,058.87	66 \$7,993.26	
AES WA II (gal)	gal	\$10.82	825		825			350 \$3,787.00	
ALUMINUM STEARATE (25)	25# sk	\$113.72	35		35			3 \$341.16	
BARITE BULK - (100)	100# sk	\$11.35	448		448				
BARITE SACK (100)	100# sk	\$13.61	280		280				
BLUE MAX (gal)	gal	\$7.18	640		640			140 \$1,005.20	
BLUE MAX (pail)	5 gal	\$50.15	5		5			10 \$501.50	
CACL2 (50)	50# sk	\$16.81	274		218	56	\$941.36	309 \$5,194.29	
CAL-CARB MIX (50)	50# sk	\$6.43	112		112				
CEDAR FIBER (40)	40# sk	\$7.31	112		112				
DEFOAMER (pail)	5 gal	\$77.07	48		48				
ECM 1 (40)	40# sk	\$33.40	100		100			21 \$701.40	
ECM 2 (40)	40# sk	\$40.78	66		66			25 \$1,019.50	
ENERLOC (40)	40# sk	\$66.33	120		120			11 \$729.63	
ENERZAN (25)	25# sk	\$152.67	113		113			6 \$916.02	
FEEDSALT (50)	50# sk	\$7.51							
FLR (50)	50# sk	\$42.32							
FLR PLUS (50)	50# sk	\$56.15	75		59	16	\$898.40	108 \$6,064.20	
GEL (100)	100# sk	\$13.23	35		35			99 \$1,309.77	
GEL (50)	50# sk								
GXM (50)	50# sk	\$40.66							
LCF BLEND (25)	25# sk	\$18.71	198		198				
LIME (50)	50# sk	\$9.21	230		189	41	\$377.61	355 \$3,269.55	
MACRO STRENGTH (25)	25# sk	\$48.94	20		20				
OIL SORB (50)	50# sk	\$7.64	5		5			2 \$15.28	
PALLETS (ea) (48X40)	each	\$15.00	193		193				
PAC LV (50)	50# sk	\$92.67	35		35				
SALT GEL (50)	50# sk	\$17.00	200		200			10 \$170.00	
SAPP (50)	50# sk	\$108.28	61		61			22 \$2,382.16	
SAPP STICK (ea)	each	\$5.46	300		300			50 \$273.00	
SHALETEX II (50)	50# sk	\$63.30							
SHRINK WRAP (ea)	each	\$15.00						20 \$300.00	
SOAP STICKS (ea)	each	\$4.77	300		300			50 \$238.50	
SODA ASH (50)	50# sk	\$17.64	36		36			8 \$141.12	
WHITE STARCH (50)	50# sk	\$39.76	190		190			201 \$7,991.76	
BRINEX II (gal)	gal	\$16.42	750		750				
AES VERT 8.6 - 10.5 ppg	bbl		1867		1867				

