

Table 1. Displays summarized Geotechnical results for the Xaudum Iron Formation (XIF) lithological Geodomains for: A. **Unconfined Compressive Strength** (UCS); B. **Brazilian Tensile Strength** (BTS); and C. **Direct Shear Strength** (DSS) of joints. All tests were conducted in accordance with ISRM's Specifications

A. Unconfined Compressive Strength (UCS) results for the XIF drill core.								
Geodomain	Drillhole ID	From (m)	To (m)	Measured UCS (Mpa)	Density (g/cm3)	Failure Mode	UCS Strength Average (MPa)	IRSM UCS Strength description
MBA	BWADD0005	321.40	321.60	143.4	3.65	conjugate	<b>132.7</b>	Very Strong (100 - 250 Mpa)
	BWADD0016	363.72	363.90	101	3.72	axial		
	BWADD0016	367.60	367.80	119.5	3.75	cataclastic		
	BWADD0016	370.13	370.30	167	3.85	cataclastic		
DIA	BWADD0005	239.36	239.60	78.2	2.61	single shear	<b>57.2</b>	Strong (50 - 100 Mpa)
	1821B116E78X	164.50	164.70	71.2	2.64	single shear		
	1821B53E25BJ	107.75	107.90	30.1	2.59	single shear		
	1821B93W87AT	142.00	143.20	57.3	2.64	axial splitting		
	1821B93W87AT	151.36	151.60	48.9	2.63	single shear		
DIAW	1821B53E25BJ	60.50	60.67	25.7	2.53	failure parallel to foliation	<b>31.6</b>	Medium Strong (25 - 50 Mpa)
	1821B53E25BJ	69.00	69.12	33.8	2.44	failure parallel to foliation		
	1821B115E67U	51.55	57.72	25.5	2.76	shear along foliation		
	1821B115E67U	57.90	58.10	41.1	2.63	conjugate		
MBW	1821B116E78X	49.55	49.70	81.3	3.48	shear	<b>81.3</b>	Strong (50 - 100 Mpa)
CAC	1821B53E25BJ	60.50	20.75	25.7	2.40	axial splitting	<b>80.4</b>	Strong (50 - 100 Mpa)
	1821B53E25BJ	69.00	24.42	33.8	2.36	cataclastic		
	1821B115E67U	51.55	21.56	25.5	2.17	shear		
	1821B115E67U	57.90	21.88	41.1	1.76	axial splitting		
B. Brazilian Tensile Strength (BTS) Results for MBA and DIA.								
Geodomain	Drill hole ID	From (m)	To (m)	Failure Load (P) (kN)	Tensile Strength (MPa)	Sample Average Tensile Strength (MPa)	BTS Geodomain Average (MPa)	Strength description
MBA	BWADD0016	367.87	368.00	25.96	14.15	<b>15.3</b>	<b>9.65</b>	Strong to Very Strong
				34.29	21.27			
				21.90	10.57			
	BWADD0016	372.20	372.40	14.08	7.75	<b>7.1</b>		
				12.15	6.52			
	BWADD0016	378.45	378.70	15.50	7.65	<b>6.4</b>		
				8.47	5.15			
	BWADD0016	380.55	381.20	14.89	7.79	<b>9.7</b>		
				26.00	13.97			
				14.45	7.54			
17.34				9.61				

DIA	1821B53E25BJ	106.70	106.90	14.72	7.97	7.7	8.82	Medium Strong to Strong
				15.36	7.66			
				14.46	7.58			
	L960013_W53U	184.95	185.10	16.99	8.95	8.8		
				15.32	8.13			
				17.47	9.40			
	1821B93W87AT	144.84	145.10	25.01	13.70	11.7		
				24.52	11.58			
				16.79	9.95			
	1821B93W87AT	153.27	153.40	8.20	4.13	7.0		
				20.95	9.84			
	<b>C. Direct Shear Strength (DSS) of joints from DIA Geodomain</b>							
<b>Geodomain</b>	<b>Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Shear Strength Results</b>				
				<b>Effective Cohesion C (kPa)</b>	<b>Effective Friction Angle <math>\phi</math> (°)</b>	<b>Surface description</b>	<b>Effective Friction Angle Interpretation</b>	
DIA	<b>1821B53E25BJ</b>	82.33	82.56	<b>55.75</b>	<b>19.29</b>	Smooth undulating	Poor	
	<b>1821B83E67AM</b>	117.20	117.36	<b>273.81</b>	<b>21.8</b>	Smooth undulating	Poor	
	<b>1821B83E67AM</b>	151.20	151.43	<b>248.06</b>	<b>36.87</b>	Smooth stepped	Good	
	<b>1821B83E67AM</b>	168.77	169.10	<b>27.02</b>	<b>28.81</b>	Smooth undulating	Fair	