

AMERICAN ENERGY SERVICES

Treatment Report

Date: 06-Jun-02	District: FARMINGTON	Job No: 70024067	Customer: DUGAN PRODUCTION
Well Name: SANCHEZ O' BRIAN	Lease: 1 SWD	Field: _____	Location: SEC06,T24N,R09W
County: San Juan	State: NM	Stage #: _____	

WELL DATA	Formation: MesaVerde	TD	PB:	Other Well Data
Casing Size: 5 1/2 in. OD	Weight: 15.50 #	Set From/To: 0 TO 4756		TEFTELLER
Liner Size: _____	Weight: _____	Set From/To: _____		
Tubing Size: 2 7/8 in. OD	Weight: 6.5 #	Set at: 0 TO 3219		
Packer Type: _____	Set at: _____			
No. of Perfs: 270	Perf Size: 0.38 "	Interval: 3286 TO 4390		

TREATMENT DATA	Job Type: ☐ Acid ☐ Frac ☒ Other	Foam (Y/N): N	Capacities and Ttl Liquid/Gas Pumped
Pad Type: produced water	Pad Volume: 2244 BBLs		
Base Fluid Type: produced water	Base Fluid Vol.: 2500 BBLs		
Foam Quality: N/A	Mitchell or CIP: _____		Tubing Cap. 18.6 bbl
Prop Types: _____	Prop Mesh: _____	Prop Quantity: _____	Casing Cap. _____
Treat Via: TUBING / CASING	☒ Tubing ☒ Casing ☐ Annulus ☐ Tubing & Annulus		Annular Cap.: _____
Hole Loaded With: produced water			Open Hole Cap.: _____

Procedure Summary	Pumped produced water beginning at .25 BPM, increasing at .25 BPM settings every 15 minutes. Pumped for approximately 375 minutes and achieved 12.25 BPM, when we were unable to pull any water from the tanks	Fluid to load: 19 bbl
		Flush Vol.: 1720.0 bbl
		Fluid to Recover: 1720 bbl
		Total CO ₂ / N ₂ : N/A

Treating Pressure (psi)		Slurry Rate BPM	Surface Slurry BBLs Pumped		VISC.	Surface CO ₂ or N ₂ Pumped		Comments
AM	STP		Stage	Total		Stage	Total	COMMENTS
530								ON LOC RIG UP
720								SAFETY MEETING
745	3000							TEST LINES
830	240	0.25	4	4				Start water
845	580	0.75	11	15				Change rate
900	940	1.3	19	34				Change rate
915	1080	1.78	26	60				Change rate
930	1220	2.2	34	94				Change rate
945	1300	2.75	42	136				Change rate
1000	1310	3.21	49	185				Change rate
1015	1410	3.76	56	241				Change rate
1030	1420	4.25	63	304				Change rate
1045	1540	4.8	70	374				Change rate
1100	1700	8.2	78	452				Change rate
1115	1780	5.75	85.5	537.5				Change rate
1130	1920	6.3	94	631.5				Change rate

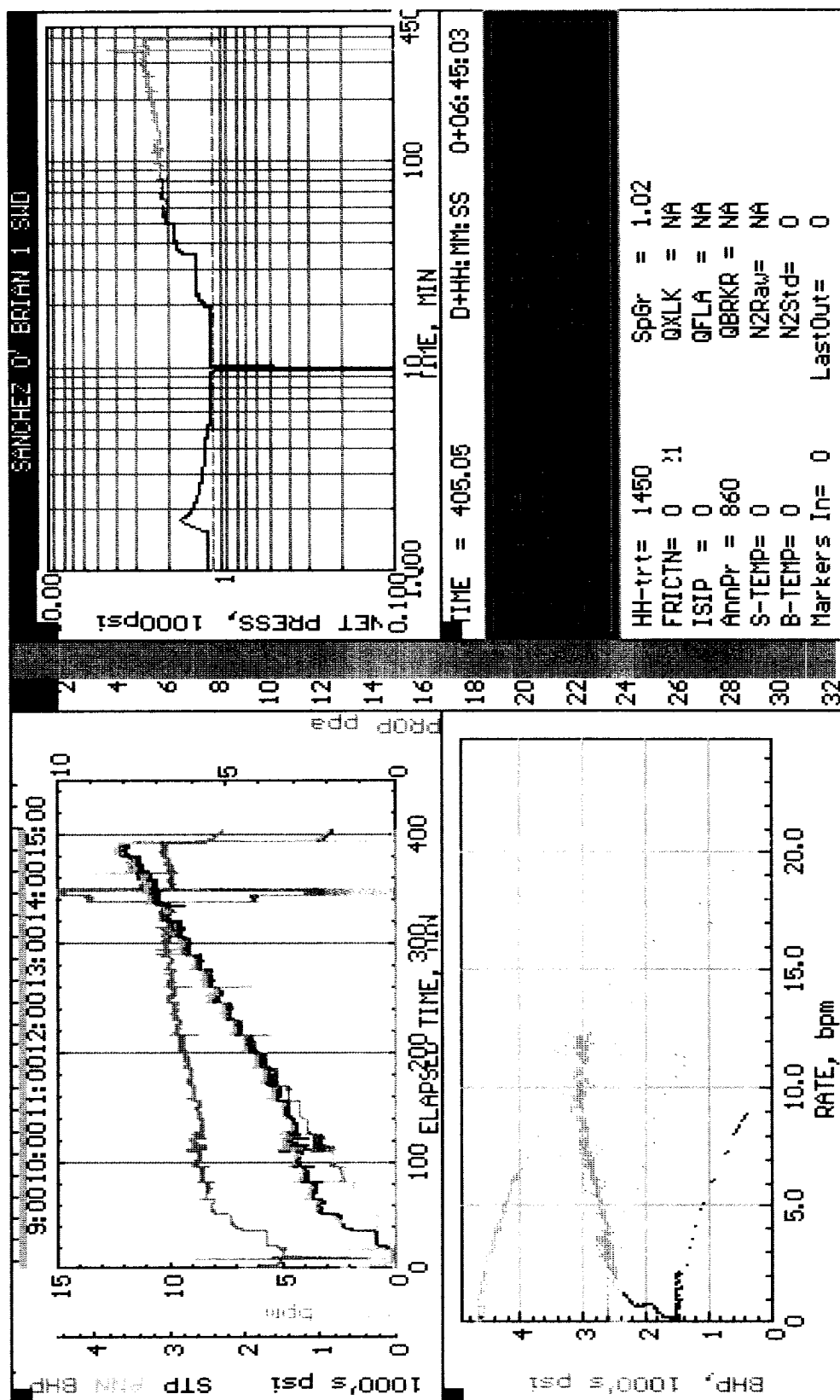
Treating Pressure: Minimum: 240 psi	Maximum: 3,560 psi	Average: 1,900 psi
treating Rate: Minimum: 0.25 bpm	Maximum: 12.25 bpm	Average: .25 TO 12.25 BPM
Initial Shut Down Pressure: 1,070 psi	Final Shut-In Pressure: 830 PSI in 15 minutes	
Operators Maximum Pressure: 3,500 psi		
Customer Representative: MR. KOCHISE	American Energy Services Rep: BEN BARELA / DOUG ZENTZ	

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 MESA VERDE
 STEP RATE 6-4-02
 DUGAN PRODUCTION COMPANY

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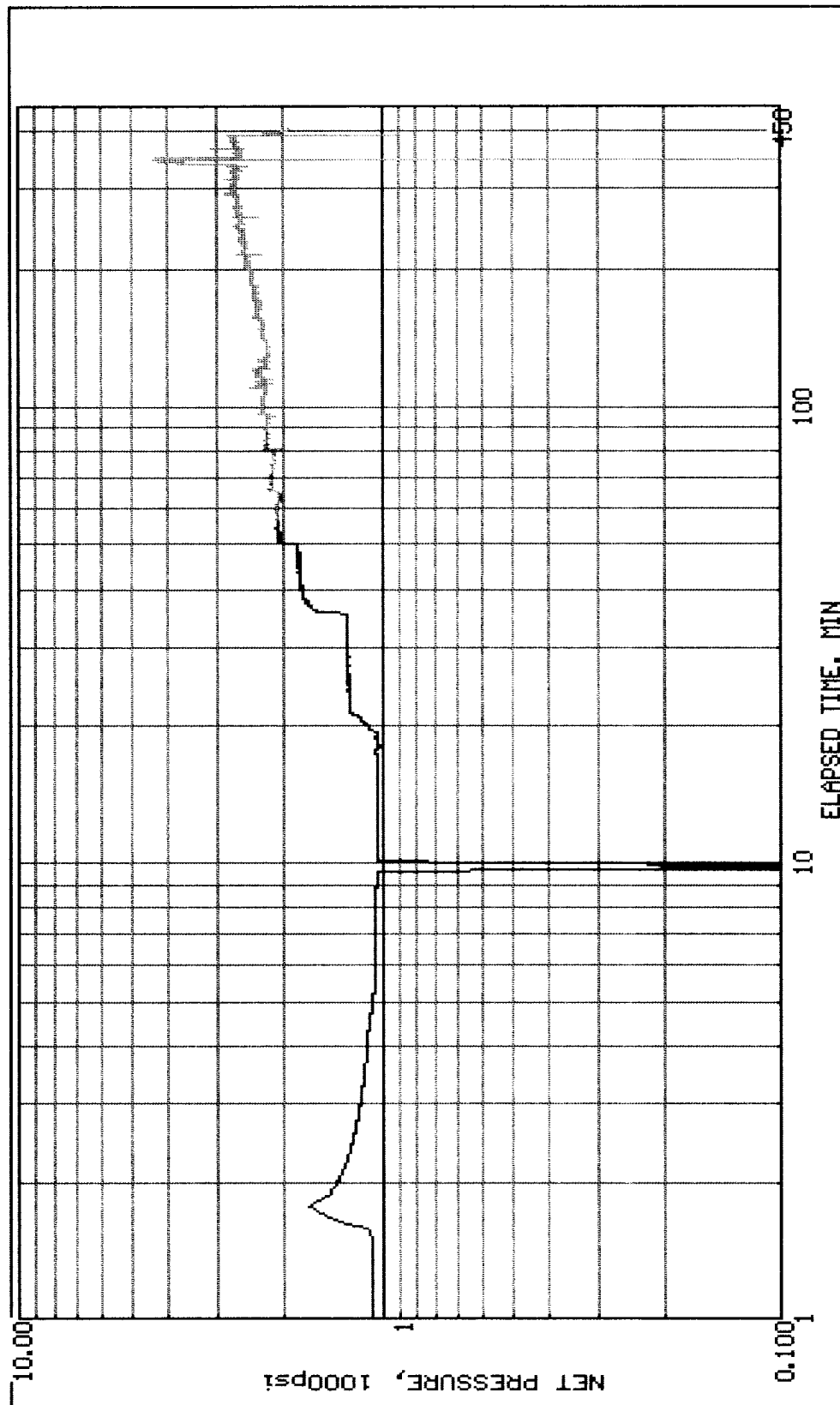
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