FLUID SAMPLE DATA

Sampler Pressure	1500 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas	6
cc. Oil	Trace
cc. Water	
cc. Mud	
Tot. Liquid cc.	
Gravity	° API @ °F.
Gas/Oil Ratio	cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	@	°F.	ppm
Recovery Mud	@	°F.	ppm
Recovery Mud Filtrate	@	°F.	ppm
Mud Pit Sample	@	°F.	30000 ppm
Mud Pit Sample Filtrate	@	°F.	ppm

Mud Weight 8.9 vis 47 sec

Date	3-20-77
Ticket Number	777808
Kind of Job	OPEN HOLE
Halliburton District	ARTESIA
Tester	MR. PITTMAN
Witness	MR. O'BRYANT
Drilling Contractor	MORANCO DRILLING COMPANY RIG # 6 BJS

EQUIPMENT & HOLE DATA

Formation Tested	Morrow		
Elevation	3646' - 3661' KB		Ft.
Net Productive Interval	30'		Ft.
All Depths Measured From	Kelly Drive Bushing		
Total Depth	10701'		Ft.
Main Hole/Casing Size	7 7/8"		
Drill Collar Length	444'	I.D. 2.25"	
Drill Pipe Length	10082'	I.D. 3.826"	
Packer Depth(s)	10563'	10569'	Ft.
Depth Tester Valve	10533'		Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1/4-3/8" Bottom Choke .75"

Recovered Feet of Reversed out approximately 10 barrels of free condensate

Recovered Feet of

Recovered Feet of

Recovered Feet of

Recovered Feet of

Mud Type ABO Mud Pressure Mud. From Tester Valve

Remarks SLID IN APPROXIMATELY 25'. OPENED TOOL WITH A FAIR BLOW WITH PSI BUILDING. GAS TO SURFACE IN 9 MINUTES, AT 230 PSI ON 1/4" CHOKE. SEE PRODUCTION TEST DATA SHEET....

TEMPERATURE	Gauge No. 991 Depth: 10548' Ft.		Gauge No. 693 Depth: 10698' Ft.		Gauge No. Depth: Ft.		TIME	
	24 Hour Clock		48 Hour Clock		Hour Clock		Tool Opened 0215 A.M. P.M.	
Est. 152 °F.	Blanked Off NO		Blanked Off YES		Blanked Off		Opened Bypass 1115 A.M. P.M.	
Actual °F.	Pressures		Pressures		Pressures			
	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic	5054	5067	5070	5134				
First Period Flow Initial	632	638-Q	1013	983			—	—
First Period Flow Final	2060	2050	2147	2126			60	61
First Period Closed in	4516	4519	4537	4550			180	181
Second Period Flow Initial	741	786-Q	1056	1069			—	—
Second Period Flow Final	1780	1795	1891	1897			60	60
Second Period Closed in	4516	4513	4537	4539			240	238
Third Period Flow Initial							—	—
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	5054	5056	5070	5109			—	—

Q = QUESTIONABLE

Legal Location Sec. - Twp. - Rng. 30 17 29

Lease Name EMPIRE SOUTH DEEP UNIT

Well No. 13

Test No. 1

Tested Interval 10569' to 10701'

Company Name HARVEY E. YATES COMPANY

Date 1977

County EDDY

State NEW MEXICO

RECEIVED

MAY 4 1977

O. C. C.
ARTESIA, OFFICE

DST 10,570-701', op 2 hrs, f/@ 3200 MCFGPD thru 3/8" chk, rev out 10 BC, (Sampler rec 6 CFG @1500 #), ISIP 1891#, FP 1013-2147#, FSIP 4537#, HP 5070-5070#, BHT 152 deg.