

FLUID SAMPLE DATA				Date 6-16-80		Ticket Number 618314	
Sampler Pressure 800 P.S.I.G. at Surface		Kind of D.S.T. OPEN HOLE TEST		Halliburton Location HOBBS			
Recovery: Cu. Ft. Gas 6.5		Tester ROBERTS-GOMEZ		Witness M. R. ELMS			
cc. Oil 1400		Drilling Contractor WARTON DRILLING COMPANY #4 TJH					
cc. Water		EQUIPMENT & HOLE DATA S					
cc. Mud		Formation Tested Bough "B" Upper					
Tot. Liquid cc. 1400		Elevation		9954' - 9965'		Ft.	
Gravity 46.7 ° API @ 60 ° F.		Net Productive Interval		Kelly Bushing		Ft.	
Gas/Oil Ratio cu. ft./bbl.		All Depths Measured From		9973'		Ft.	
RESISTIVITY		Total Depth		7 7/8"			
CHLORIDE CONTENT		Main Hole/Casing Size		701' I.D. 2.50"			
Recovery Water .079 @ 74 ° F. 70,500 ppm		Drill Collar Length		9200' I.D. 3.826"			
TOOL TOP .074 @ 74 ° F. 75,000 ppm		Drill Pipe Length		9939' - 9947'		Ft.	
Recovery Mud		Packer Depth(s)		9908'		Ft.	
Recovery Mud Filtrate		Depth Tester Valve					
Mud Pit Sample .059 @ 74 ° F. 89,000 ppm							
Mud Pit Sample Filtrate							
Mud Weight 9.8 vis sec.							
TYPE AMOUNT		Depth Back Ft. Pres. Valve		Surface Choke 1" Adj.		Bottom Choke .75"	
Cushion							
Recovered 2873 Feet of		gas cut oil (top of recovery gravity = 43.0 @ 60°.)					
Recovered 700 Feet of		gas cut oil - trace of formation fluid.					
Recovered 200 Feet of		formation water.					
Recovered		Feet of					
Recovered		Feet of					
Remarks SEE PRODUCTION TEST DATA SHEET . . .							
5% oil in mud system.							
TEMPERATURE		Gauge No. 7653		Gauge No. 7652		Gauge No.	
Depth: 9924 Ft.		Depth: 9969 Ft.		Depth: Ft.		TIME (00:00-24:00 hrs.)	
Est. 140 ° F.		24 Hour Clock		24 Hour Clock		Hour Clock	
Blanked Off NO		Blanked Off YES		Blanked Off		Tool Opened 0944	
Actual ° F.		Pressures		Pressures		Pressures	
		Field Office		Field Office		Field Office	
Initial Hydrostatic 5450		5445.4		5493		5492.5	
Initial 440		417.5		446		431.9	
Flow Final 703		714.2		745		736.1	
Closed in 2636		2646.4		2649		2661.7	
Initial 703		690.1		724		704.2	
Flow Final 1401		1359.3		1381		1380.5	
Closed in 2592		2550.9		2586		2566.6	
Initial							
Flow Final							
Closed in							
Final Hydrostatic 5297		5244.5		5302		5284.4	

Legal Location
Sec. 1 Twp. 34N

30 - 12S - 34E

SEAY
Lease Name

Well No.

Test No.

Fluid Area

EAST HIGH TOWER

County

LEA

State

NEW MEXICO

9947' - 9973'
Tested Interval

HARPER OIL & GAS COMPANY
Lease Owner/Company Name

RECEIVED

SEP 5 1989

FOR THE DIRECTOR

Casing perms. _____ Bottom choke _____ Surf. temp _____ °F Ticket No. 618314
 Gas gravity _____ Oil gravity _____ GOR _____
 Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F
 INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

Date Time	a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
2230						Tester on location.
0530						Picked up tools.
0620						Went in hole.
0944						On bottom. Bubble Hose slid 3' to
						bottom. Opened tool with a strong blow.
0949		Bubble Hose	85			Increase.
0952		1/4	120			Opened on 1/4" choke.
0954			130			Increase.
0956						Gas to surface in 12 minutes.
0959			158			Increase.
1004			178			"
1009			195			"
1014			210			"
1014			"			Closed tool.
1114		1/4	40			Opened tool.
1115						Opened tool.
1120			45			Increase.
1125			48			"
1130			55			"
1135			60			"
1140			69			"
1145			85			"
1150			105			"
1155			124			"
1200			132			"

Casing perms. _____ Bottom choke _____ Surf. temp. _____ °F Ticket No. 618314
 Gas gravity _____ Oil gravity _____ GOR _____ PAGE 2
 Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F
 INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

Date Time	a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
1205		1/4	143			Increase.
1210			151			"
1215			155			"
1220			160			"
1225			166			"
1230			168			"
1235			"			"
1240			166			Decline.
1245			164			"
1245			"			Closed tool.
						Opened tool back.
						Closed tool.
1247						Opened tool again.
1247						Closed tool - watched tool - tool closed
						for final closed in pressure.
1545						Pulled off bottom. Opened bypass.
						Pulled out of hole.
1747						Dropped bar.
1754						Reversed out drill pipe.
1904						Continued out of hole.

Gauge No. 7653				Depth 9924				Clock No. 20674				24 hour				Ticket No. 618314							
First Flow Period				First Closed In Pressure				Second Flow Period				Second Closed In Pressure				Third Flow Period				Third Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.				
0	.0000	417.5		.0000	714.2		690.1	.0000		.0000	1359.3												
1	.0138*	417.5		.0224**	1904.7		**690.1	.0099*		.0336***	1803.0												
2	.0310	421.9		.0353	2045.5		720.8	.0364		.0739	1969.6												
3	.0483	479.1		.0481	2167.0		797.8	.0628		.1142	2078.0												
4	.0655	560.4		.0609	2245.1		876.9	.0893		.1545	2162.6												
5	.0828	635.1		.0737	2318.8		958.2	.1158		.1948	2229.9												
6	.1000	714.2		.0865	2373.1		1047.6	.1422		.2351	2284.1												
7				.0994	2418.6		1121.2	.1687		.2755	2331.8												
8				.1122	2459.8		1186.1	.1951		.3158	2373.1												
9				.1250	2496.7		1235.9	.2216		.3561	2407.8												
10				.1378	2527.1		1285.7	.2481		.3964	2438.1												
11				.1506	2555.3		1326.8	.2745		.4367	2466.3												
12				.1635	2579.1		1359.3	.3010		.4770	2492.4												
13				.1763	2603.0					.5173	2514.1												
14				.1891	2622.5					.5576	2533.6												
15				.2020	2646.4					.5980	2550.9												

Gauge No. 7652				Depth 9969				Clock No. 10567				24 hour			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.0000	431.9		.0000	736.1		704.2	.0000		.0000	1380.5				
1	.0134*	431.9		.0234**	1828.7		**704.2	.0101**		.0334***	1841.4				
2	.0301	440.4		.0368	2012.6		759.5	.0370		.0735	2000.0				
3	.0468	510.6		.0502	2154.3		848.9	.0639		.1136	2109.9				
4	.0635	602.1		.0636	2247.3		921.2	.0908		.1538	2188.1				
5	.0803	672.3		.0770	2325.5		1014.7	.1177		.1939	2253.7				
6	.0970	736.1		.0904	2380.5		1099.3	.1446		.2740	2308.6				
7				.1038	2431.2		1164.9	.1715		.2741	2353.0				
8				.1172	2475.6		1224.1	.1984		.3142	2393.2				
9				.1306	2513.7		1272.7	.2253		.3543	2427.0				
10				.1440	2549.6		1319.2	.2522		.3944	2458.7				
11				.1573	2579.2		1359.5	.2791		.4345	2486.2				
12				.1707	2600.4		1380.5	.3060		.4746	2511.6				
13				.1841	2627.9					.5147	2530.6				
14				.1975	2649.0					.5949	2549.6				
15				.2110	2661.7					.5950	2566.6				

Gauge No. 7651				Depth 9924				Clock No. 10567				24 hour			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.0000	431.9		.0000	736.1		704.2	.0000		.0000	1380.5				
1	.0134*	431.9		.0234**	1828.7		**704.2	.0101**		.0334***	1841.4				
2	.0301	440.4		.0368	2012.6		759.5	.0370		.0735	2000.0				
3	.0468	510.6		.0502	2154.3		848.9	.0639		.1136	2109.9				
4	.0635	602.1		.0636	2247.3		921.2	.0908		.1538	2188.1				
5	.0803	672.3		.0770	2325.5		1014.7	.1177		.1939	2253.7				
6	.0970	736.1		.0904	2380.5		1099.3	.1446		.2740	2308.6				
7				.1038	2431.2		1164.9	.1715		.2741	2353.0				
8				.1172	2475.6		1224.1	.1984		.3142	2393.2				
9				.1306	2513.7		1272.7	.2253		.3543	2427.0				
10				.1440	2549.6		1319.2	.2522		.3944	2458.7				
11				.1573	2579.2		1359.5	.2791		.4345	2486.2				
12				.1707	2600.4		1380.5	.3060		.4746	2511.6				
13				.1841	2627.9					.5147	2530.6				
14				.1975	2649.0					.5949	2549.6				
15				.2110	2661.7					.5950	2566.6				

Gauge No. 7650				Depth 9924				Clock No. 10567				24 hour			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.0000	431.9		.0000	736.1		704.2	.0000		.0000	1380.5				
1	.0134*	431.9		.0234**	1828.7		**704.2	.0101**		.0334***	1841.4				
2	.0301	440.4		.0368	2012.6		759.5	.0370		.0735	2000.0				
3	.0468	510.6		.0502	2154.3		848.9	.0639		.1136	2109.9				
4	.0635	602.1		.0636	2247.3		921.2	.0908		.1538	2188.1				
5	.0803	672.3		.0770	2325.5		1014.7	.1177		.1939	2253.7				
6	.0970	736.1		.0904	2380.5		1099.3	.1446		.2740	2308.6				
7				.1038	2431.2		1164.9	.1715		.2741	2353.0				
8				.1172	2475.6		1224.1	.1984		.3142	2393.2				
9				.1306	2513.7		1272.7	.2253		.3543	2427.0				
10				.1440	2549.6		1319.2	.2522		.3944	2458.7				
11				.1573	2579.2		1359.5	.2791		.4345	2486.2				
12				.1707	2600.4		1380.5	.3060		.4746	2511.6				
13				.1841	2627.9					.5147	2530.6				
14				.1975	2649.0					.5949	2549.6				
15				.2110	2661.7					.5950	2566.6				

Gauge No. 7649				Depth 9924				Clock No. 10567				24 hour			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.0000	431.9		.0000	736.1		704.2	.0000		.0000	1380.5				
1	.0134*	431.9		.0234**	1828.7		**704.2	.0101**		.0334***	1841.4				
2	.0301	440.4		.0368	2012.6		759.5	.0370		.0735	2000.0				
3	.0468	510.6		.0502	2154.3		848.9	.0639		.1136	2109.9				
4	.0635	602.1		.0636	2247.3		921.2	.0908		.1538	2188.1				
5	.0803	672.3		.0770	2325.5		1014.7	.1177		.1939	2253.7				
6	.0970	736.1		.0904	2380.5		1099.3	.1446		.2740	2308.6				
7				.1038	2431.2		1164.9	.1715		.2741	2353.0				
8				.1172	2475.6		1224.1	.1984		.3142	2393.2				
9				.1306	2513.7		1272.7	.2253		.3543	2427.0				
10				.1440	2549.6		1319.2	.2522		.3944	2458.7				
11				.1573	2579.2		1359.5	.2791		.4345	2486.2				
12				.1707	2600.4		1380.5	.3060		.4746	2511.6				
13				.1841	2627.9					.5147	2530.6				
14				.1975	2649.0					.5949	2549.6				
15				.2110	2661.7					.5950	2566.6				

Gauge No. 7648				Depth 9924				Clock No. 10567				24 hour			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.0000	431.9		.0000	736.1		704.2	.0000		.0000	1380.5				
1	.0134*	431.9		.0234**	1828.7		**704.2	.0101**		.0334***	1841.4				
2	.0301	440.4		.0368	2012.6		759.5	.0370		.0735	2000.0				
3	.0468	510.6		.0502	2154.3		848.9	.0639		.1136	2109.9				
4	.0635	602.1		.0636	2247.3		921.2	.0908		.1538	2188.1				
5	.0803	672.3		.0770	2325.5		1014.7	.1177		.1939	2253.7				
6	.0970	736.1		.0904	2380.5		1099.3	.1446		.2740	2308.6				
7				.1038	2431.2		1164.9	.1715		.2741	2353.0				
8				.1172	2475.6		1224.1	.1984		.3142	2393.2				
9				.1306	2513.7		1272.7	.2253		.3543	2427.0				
10				.1440	2549.6										

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

TICKET NO. 618314

No. 180-653

To Harper Oil CompanyDate 6-17-802004 Wilco BuildingMidland, Texas

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 6-17-80Well No. Seay #1 Depth _____ Formation Bough "B"County Lea Field B. Hightower Source DST # 1

	Fluid Change	Pool Top	Pit Sample
Resistivity	0.079 @ 74 F.	0.074 @ 74 F.	0.059 @ 74 F.
Specific Gravity			
pH			
Calcium (Ca)			*MPL
Magnesium (Mg)			
Chlorides (Cl)	70,500	75,000	89,000
Sulfates (SO ₄)			
Bicarbonates (HCO ₃)			
Soluble Iron (Fe)			
Sampler	- 100% Oil - API Gr. @ 60 F. - 46.7		
Top of Recovery-	100% Oil - API Gr. @ 60 F. - 43.0		

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

cc:

By _____
CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

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	C. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Drill Collars				
Reversing Sub	6"	3"	1'	9809'
Water Cushion Valve				
Drill Pipe	4 1/2"	3.826"	9200'	
Drill Collars	6 1/2"	2.50"	701'	
Handling Sub & Choke Assembly				
Dual CIP Valve	6.5"	3"	1' X OVER	
Dual CIP Sampler	5.75"	2"	1' X OVER	
Hydro-Spring Tester	5"	.75"	5'	9908'
Multiple CIP Sampler	5"	.75"	4'	
Extension Joint	5"	.87"	10'	
AP Running Case	5"	3.50"	4'	9924'
Hydraulic Jar	5"	1.75"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	7"	1.68"	6'	9939'
Distributor	5"	1.68"	2'	
Packer Assembly	7"	1.68"	6'	9947'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5.75"	2.87"	18'	
Blanked-Off B.T. Running Case	5.75"	2.50"	6'	9969'
Total Depth				9973'