

Schlumberger In-House DST Interpretation Prepared For

COBRA OIL & GAS CORPORATION

WELL: STATE 7 #1
FIELD: WILDCAT
COUNTY: LEA
TEST NUMBER: ONE
TEST DATE: 22-AUG-1997

FORMATION: DEVONIAN
TEST TYPE: CONVENTIONAL
TEST INTERVAL: 12,549 - 12,558
SWS S.O. NUMBER: 1070285
REPORT PREPARED BY: HARVIN L. BROUGHTON

SUMMARY OF RESULTS

K = 20.3	md	BHT = 189	degf
SKIN = 108		INITIAL HYDROSTATIC 6842	
RADIUS OF INV = 500	ft	IFP (15 min) 657 - 677	
Pi = 4681	psia	ISI (45min) 4678	
THICKNESS (h) = 9	ft	FFP (120 min) 707 - 774	
RESERVOIR Homogeneous		FSI (240 min) 4674	
BOUNDARY Infinite		FINAL HYDROSTATIC 6674	
WELL Storage & Skin		CUSHION 1500 ft. Water	

SAMPLE CHAMBER, PRESSURE = 520 GOR = 481 GLR = 306

VOLUME	FLUID TYPE	PROPERTIES
2.12 cu ft	GAS	
700 cc	OIL	47 API@60degf
400 cc	MUD	38,000 ppm

PIPE RECOVERY

VOLUME	FLUID TYPE	PROPERTIES
326 ft	Oil, Oil & Gas Cut Cushion	45.7 API@60degf
235 ft	MUD	.185@86, 30,000 ppm
ft		

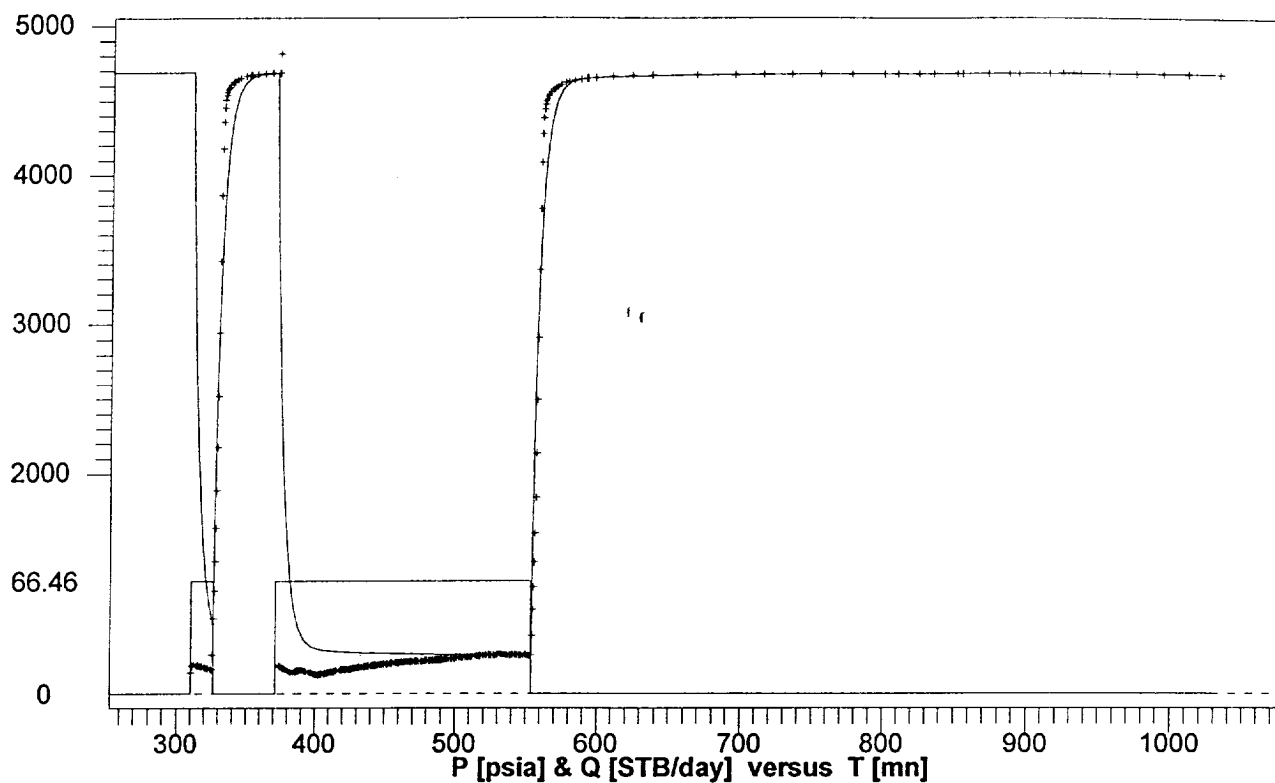
COMMENTS: DST # 1 of the Devonian formation produced oil & associated gas into the drillstring. The water in the drillstring was attributed to the water cushion. An average rate from the test of 66 BOPD was used in the data interpretation. The test data suggests a well in an infinite, homogeneous reservoir with fair permeability and high Skin at the time and conditions of the test. There was an obvious indication of partial reservoir penetration and it is believed that some of the Skin is caused by this condition.

- SAPHIR -	Main Results		1STAT7#1
Company	Cobra Oil & Gas Corp	Formation interval	12,549 - 12,558
Field	Wildcat	Perforated interval	Open Hole
Well	State 7 #1	SWS S.O. Number	1070285
Test	DST #1	SWS Location	Hobbs, NM
Date	22-AUG-1997	Tester	K. Beasley
Gauge	SLSR-777	Report Done By	Harvin L. Broughton
Depth	12,528		

TEST TYPE	Standard	FLUID TYPE	Oil
Porosity Phi (%)	10	Volume Factor B	1.21403
Well Radius rw	0.3281 ft	Total Compr. ct	1E-5 psi-1
Pay Zone h	9 ft	Viscosity	0.545854 cp

Flow Period #	5	RESERVOIR	Homogeneous
Rate	0 STB/day	BOUNDARY	Infinite
Rate Change	66.46 STB/day	WELL	Storage & Skin
P at dt=0	773.61 psia	Storage C	7.2E-5 STB/psi
Pi	4681.73 psia	Skin factor	108
Time Match	22.9 (mn)-1	kh	183 md.ft
Pressure Match	0.0294 (psia)-1	k	20.3 md
		Mobility k/mu	37.2

- SAPHIR -	Simulation		1STAT7#1
Company	Cobra Oil & Gas Corp	Test	DST #1
Field	Wildcat	Date	22-AUG-1997
Well	State 7 #1	Gauge	SLSR-777



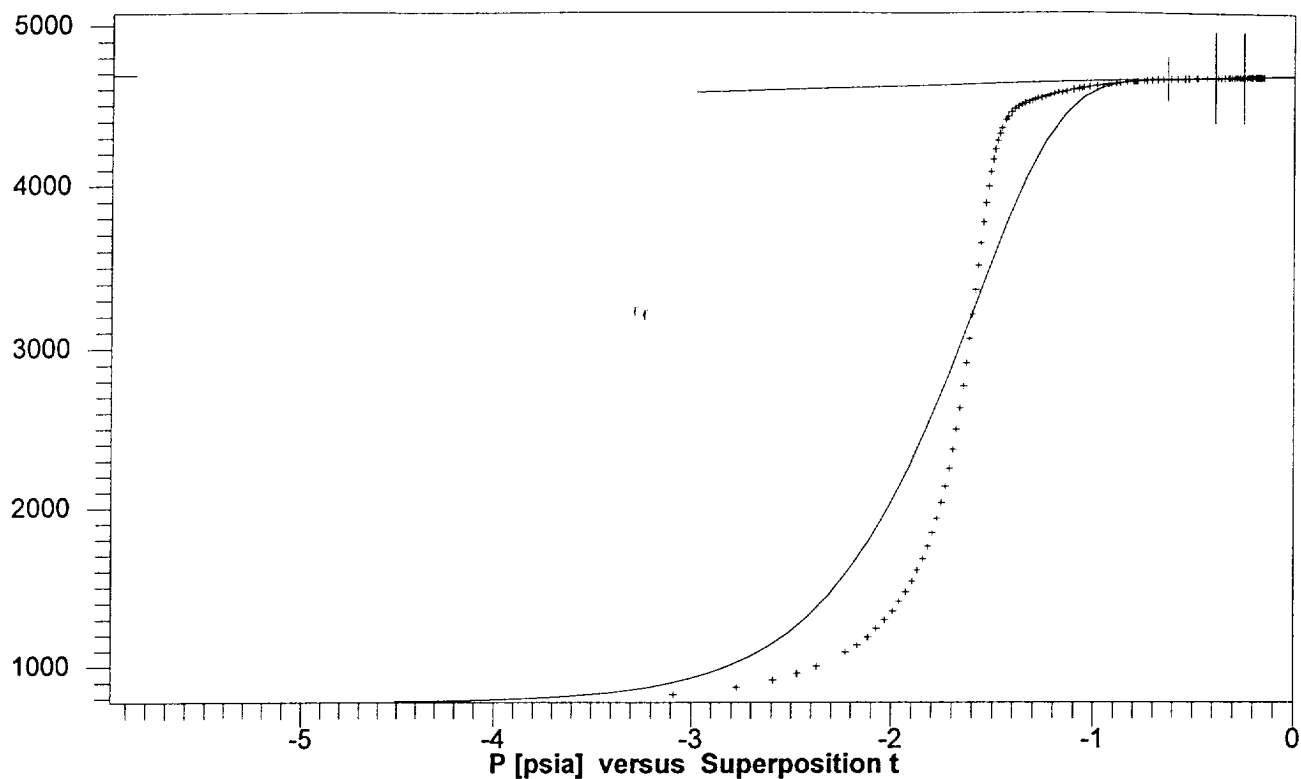
Flow Period # 5
Rate 0 STB/day
Rate Change 66.46 STB/day
P at dt=0 773.61 psia
Pi 4681.73 psia

Time Match 22.9 (mn)-1
Pressure Match 0.0294 (psia)-1

RESERVOIR Homogeneous
BOUNDARY Infinite
WELL Storage & Skin
Storage C 7.2E-5 STB/psi
Skin factor 108

kh 183 md.ft
k 20.3 md
Mobility k/mu 37.2

- SAPHIR -	Semi-Log		1STAT7#1
Company	Cobra Oil & Gas Corp	Test	DST #1
Field	Wildcat	Date	22-AUG-1997
Well	State 7 #1	Gauge	SLSR-777



Flow Period # 5
Rate 0 STB/day
Rate Change 66.46 STB/day
P at dt=0 773.61 psia
Pi 4681.73 psia

RESERVOIR Homogeneous
BOUNDARY Infinite
WELL Storage & Skin
Storage C 7.2E-5 STB/psi
Skin factor 108

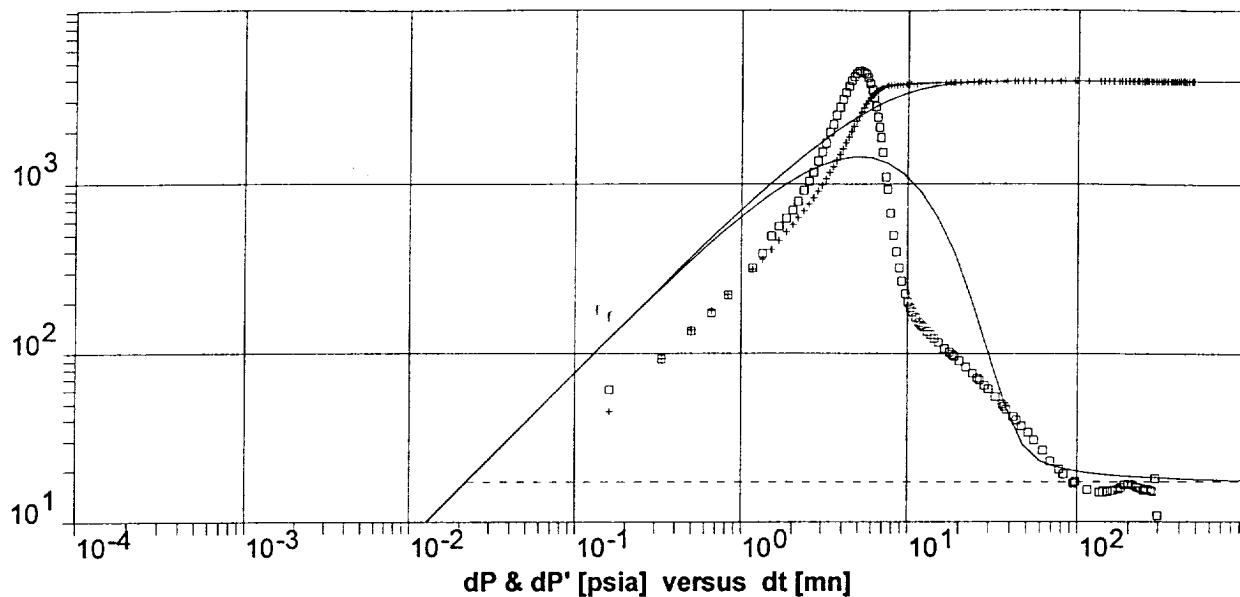
STRAIGHT LINE
From 134 mn
To 252 mn
Slope 36.6 psia
Intercept 4681.94 psia
value at dt=1hr 4658.86 psia

kh 183 md.ft
k 20.3 md
Mobility k/mu 37.2

-> p* 4681.94 psia
-> PMatch 0.0314 (psia)-1
-> k.h 196 md.ft
-> k 21.7 md
-> Skin 116

Time Match 22.9 (mn)-1
Pressure Match 0.0294 (psia)-1

- SAPHIR -	Log-Log		1STAT7#1
Company	Cobra Oil & Gas Corp	Test	DST #1
Field	Wildcat	Date	22-AUG-1997
Well	State 7 #1	Gauge	SLSR-777



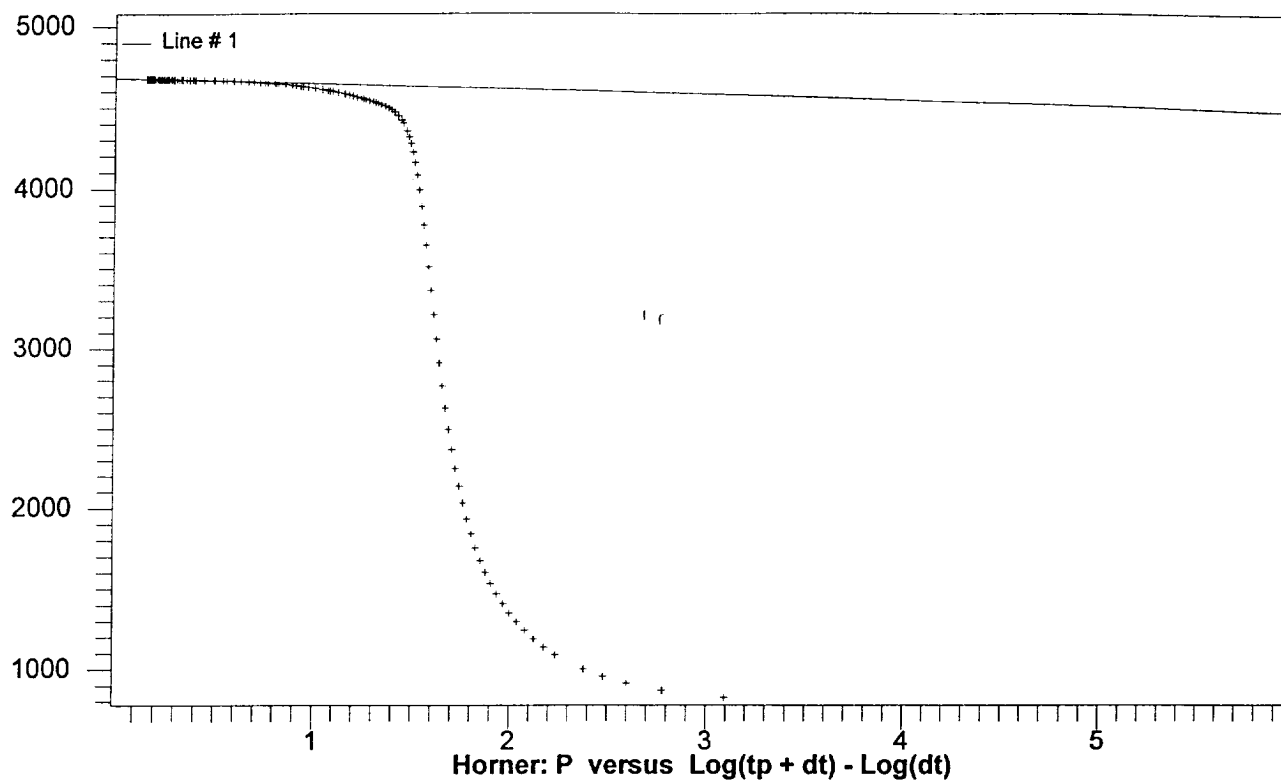
Flow Period # 5
Rate 0 STB/day
Rate Change 66.46 STB/day
P at dt=0 773.61 psia
Smoothing 0.1
Pi 4681.73 psia

Time Match 22.9 (mn)-1
Pressure Match 0.0294 (psia)-1

RESERVOIR Homogeneous
BOUNDARY Infinite
WELL Storage & Skin
Storage C 7.2E-5 STB/psi
Skin factor 108

kh 183 md.ft
k 20.3 md
Mobility k/mu 37.2
Investig. R 500 ft

- SAPHIR -	Flexible		1STAT7#1
Company	Cobra Oil & Gas Corp	Test	DST #1
Field	Wildcat	Date	22-AUG-1997
Well	State 7 #1	Gauge	SLSR-777



Flow Period # 5
Rate 0 STB/day
Rate Change 66.46 STB/day
P at dt=0 773.61 psia
P_i 4681.73 psia

Flexible line # 1
P vs $\text{Log}(dt)$, BU
Slope -34.8878
Intercept 4681.44
kh 205 md.ft
k 22.8 md
Skin factor 122

- SAPHIR -		History Listings		1STAT7#1
Company	Cobra Oil & Gas Corp	Formation interval	12,549 - 12,558	
Field	Wildcat	Perforated interval	Open Hole	
Well	State 7 #1	SWS S.O. Number	1070285	
Test	DST #1	SWS Location	Hobbs, NM	
Date	22-AUG-1997	Tester	K. Beasley	
Gauge	SLSR-777	Report Done By	Harvin L. Broughton	
Depth	12,528			

Date	Time	FP #	Rate STB/day	Duration mn
21/08/97	21:07:33	1	0.00	310.450
22/08/97	02:18:00	2	66.4600	15.9996
	02:33:59	3	0.00	45.0000
	03:18:59	4	66.4600	182.670
	06:21:40	5	0.00	479.158

- SAPHIR -	History Listings		1STAT7#1
Company	Cobra Oil & Gas Corp	Formation interval	12,549 - 12,558
Field	Wildcat	Perforated interval	Open Hole
Well	State 7 #1	SWS S.O. Number	1070285
Test	DST #1	SWS Location	Hobbs, NM
Date	22-AUG-1997	Tester	K. Beasley
Gauge	SLSR-777	Report Done By	Harvin L. Broughton
Depth	12,528		

Date	Time	Pressure psia	Date	Time	Pressure psia	Date	Time	Pressure psia
22/08/97	02:18:00	657.580	22/08/97	03:51:59	649.790	22/08/97	05:00:40	735.040
	02:21:40	708.210		03:54:10	652.550		05:03:10	736.660
	02:23:40	704.760		03:56:19	656.270		05:05:19	736.880
	02:25:40	700.870		03:57:59	661.590		05:07:29	742.700
	02:28:10	694.320		04:00:10	662.850		05:10:49	741.700
	02:30:19	688.020		04:02:10	669.960		05:13:49	743.220
	02:33:00	678.650		04:04:30	671.370		05:15:59	745.110
	02:34:49	1275.79		04:06:40	677.730		05:18:00	745.700
	02:36:30	2068.73		04:08:30	679.890		05:21:19	749.160
	02:38:10	3416.12		04:10:19	679.830		05:25:00	752.450
	02:39:49	4391.81		04:12:40	683.240		05:28:10	757.220
	02:41:29	4544.65		04:14:29	687.040		05:31:10	758.510
	02:43:10	4584.24		04:16:29	690.800		05:34:29	763.280
	02:46:40	4621.68		04:18:29	693.890		05:37:19	764.490
	02:53:49	4654.48		04:20:49	696.600		05:39:49	767.970
	03:03:40	4670.80		04:23:19	700.020		05:43:30	771.630
	03:19:59	4642.98		04:25:30	703.220		05:45:29	773.340
	03:21:40	703.320		04:27:49	705.910		05:48:00	774.790
	03:23:40	692.920		04:29:59	708.300		05:51:59	775.790
	03:25:19	686.170		04:31:49	709.620		05:55:49	775.800
	03:27:29	676.030		04:34:10	712.750		05:59:00	783.120
	03:29:49	663.750		04:36:10	713.230		06:01:40	781.060
	03:32:10	664.450		04:38:59	717.880		06:04:10	776.560
	03:34:19	668.390		04:42:00	721.820		06:06:49	776.460
	03:36:00	672.370		04:44:29	724.840		06:09:30	778.890
	03:38:10	674.980		04:46:49	725.350		06:13:00	774.880
	03:40:30	669.420		04:48:29	727.000		06:15:10	776.310
	03:43:30	661.750		04:51:10	730.630		06:18:49	776.170
	03:45:49	655.710		04:53:40	730.020		06:21:40	774.480
	03:48:00	647.780		04:56:10	733.800		06:23:29	1290.70
	03:49:59	645.160		04:58:49	733.790		06:25:10	2024.80

- SAPHIR -	History Listings		1STAT7#1
Company	Cobra Oil & Gas Corp	Formation interval	12,549 - 12,558
Field	Wildcat	Perforated interval	Open Hole
Well	State 7 #1	SWS S.O. Number	1070285
Test	DST #1	SWS Location	Hobbs, NM
Date	22-AUG-1997	Tester	K. Beasley
Gauge	SLSR-777	Report Done By	Harvin L. Broughton
Depth	12,528		

Date	Time	Pressure psia
22/08/97	06:26:49	3357.43
	06:28:30	4316.42
	06:30:10	4484.67
	06:32:19	4534.71
	06:37:10	4582.71
	06:45:49	4620.43
	06:58:49	4643.19
	07:08:29	4651.16
	07:58:30	4664.52
	09:22:10	4670.15
	10:28:00	4672.69
	11:13:40	4673.66
	11:54:30	4674.41
	12:31:40	4675.12
	13:21:10	4674.55
	14:19:19	4674.88