FLUID SAMPLE DATA

Sampler Pressure 10 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas 0
cc. Oil 0
cc. Water 1700
cc. Mud Trace
Tot. Liquid cc. 1700
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.	____ ppm
Mud Pit Sample Filtrate	____ @ ____ °F.	____ ppm

Mud Weight 10.1 vis 60 sec.

Date 6-14-81 Ticket Number 116366
Kind of D.S.T. ON BOTTOM STRADDLE Halliburton Location HOBBS
Tester MR. GOMEZ Witness MR. SCOTT
Drilling Contractor MR. MANNEY W E K DRILLING COMPANY #3 bc

EQUIPMENT & HOLE DATA

Formation Tested San Andres (P2)
Elevation 4230' GL 4241' KB Ft.
Net Productive Interval 10' Ft.
All Depths Measured From Kelly Bushing
Total Depth 3965' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 586' I.D. 2.50"
Drill Pipe Length 3229' I.D. 3.340"
Packer Depth(s) 3846' - 3852' - 3878' - 3884' Ft.
Depth Tester Valve 3828' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1" ADJ. Bottom Choke .875"

Recovered 240 Feet of Mud cut formation water
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET.

TEMPERATURE	Gauge No. 731 Depth: 3829' Ft.	Gauge No. 255 Depth: 3870' Ft.	Gauge No. Depth: Ft.	TIME (00:00-24:00 hrs.)
	24 Hour Clock	24 Hour Clock	Hour Clock	Tool Opened 1320
Est. °F.	Blanked Off No	Blanked Off Yes	Blanked Off	Opened Bypass 1741
Actual 105 °F.	Pressures	Pressures	Pressures	

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		2185.6	2148.7	2231	2182.1			—	—
First Period Flow	Initial	28.8	14.3	42.8	38.4			30	28
	Final	71.9	53.1	71.3	66.9			60	61
	Closed in	940.7	946.3	963.4	959.1			—	—
Second Period Flow	Initial	71.9	63.2	71.3	86.8			60	60
	Final	143.7	135.0	156.7	148.1			121	122
	Closed in	940.7	943.4	963.4	953.5			—	—
Third Period Flow	Initial								
	Final								
	Closed in							—	—
Final Hydrostatic		2185.6	2007.0	2231	2036.7				

Legal Location Sec. - Twp. - Rng. 8 - 8S - 31E
Lease Name INGRAM FEDERAL
Well No. 18
Test No. 1
Tested Interval 3852' - 3878'
Field Area TOM TOM
County CHAVES
State NEW MEXICO
Lease Owner/Company Name SUNDANCE OIL COMPANY

FORM 181-R2 – PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S

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Casing perfs. _____ Bottom choke _____ Surf. temp _____ °F Ticket No. 116366
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
0820					On location
0855					Unloaded and made up tools
1115					Went in hole
1310	Blow Hose	0			Opened tool with a weak blow
1315	"	0			Increased to 2" blow in bucket
1320	"	0			3"
1325	"	0			4"
1330	"	0			5"
1335	"	0			6"
1340	"	0			Closed tool with a 6¼" blow
1440	"	0			Opened tool with a weak blow
1450	"	0			Increased to 1" blow in bucket
1500	"	0			1½"
1510	"	0			3"
1520	"	0			4½"
1530	"	0			5½"
1540	"	0			Closed tool with a 6" blow
1741					Opened by-pass
1745					Pulled out of hole

FORM 182-R1—PRINTED IN U.S.A.

PRODUCTION TEST DATA

12 LITTLE'S

Gauge No. 731	Depth 3829'	Clock No. 7275	24 hour	Ticket No. 116366

	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.	Time Defl. .000"	$\text{Log}\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log}\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log}\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.0000	14.3	.0000		53.1	.0000	63.2	.0000		135.0					
1	.0141	15.8	.0160		769.7*	.0343	73.2	.0260		792.3					
2	.0283	22.9	.0288		823.4	.0687	90.5	.0521		846.0					
3	.0424	30.1	.0416		857.3	.1030	103.4	.0781		871.4					
4	.0566	35.9	.0543		877.1	.1373	114.9	.1041		889.8					
5	.0707	41.6	.0671		892.6	.1717	126.4	.1302		901.1					
6	.0849	47.4	.0799		902.5	.2060	135.0	.1562		909.5					
7	.0990	53.1	.0927		912.4			.1822		918.0					
8			.1055		919.4			.2083		922.3					
9			.1183		926.5			.2343		926.5					
10			.1311		930.7			.2603		930.7					
11			.1439		935.0			.2864		933.6					
12			.1566		937.8			.3124		936.4					
13			.1694		940.6			.3384		937.8					
14			.1822		943.4			.3645		940.6					
15			.1950		946.3			.3970		943.4**					

Gauge No. 255	Depth 3870'	Clock No. 6115	24 hour

0	.0000	38.4	.0000		66.9	.0000	86.8	.0000		148.1					
1	.0134	38.4	.0166		774.6*	.0332	91.1	.0266		791.5					
2	.0269	38.4	.0300		838.0	.0663	103.9	.0532		850.7					
3	.0403	42.7	.0433		871.8	.0995	116.8	.0799		880.2					
4	.0537	47.0	.0566		894.3	.1327	128.2	.1065		897.1					
5	.0671	54.1	.0699		908.4	.1658	138.1	.1331		909.8					
6	.0806	61.2	.0832		919.7	.1990	148.1	.1597		919.7					
7	.0940	66.9	.0965		928.1			.1864		928.1					
8			.1098		935.2			.2130		932.4					
9			.1231		940.8			.2396		938.0					
10			.1364		946.4			.2662		940.8					
11			.1498		949.3			.2929		943.6					
12			.1631		953.5			.3195		946.4					
13			.1764		956.3			.3461		949.3					
14			.1897		957.7			.3727		952.1					
15			.2030		959.1			.4060		953.5**					
Reading Interval		4		4			10		8						Minutes

REMARKS: *Interval = 5 minutes **Interval = 10 minutes

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SPECIAL PRESSURE DATA

TICKET NO. 116366

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Drill Collars				
Reversing Sub	5.75"	3"	1'	
Water Cushion Valve				
Drill Pipe	4"	3.340"	3229'	
Drill Collars	6"	2.50"	586'	
~~Handling Sub & Choke Assembly~~ X over	6"	3"	1'	
Dual CIP Valve				
Dual CIP Sampler	5"	.87"	8'	3824'
Hydro-Spring Tester	5"	.75"	4'	3828'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.25"	4'	3829'
Hydraulic Jar	5"	1.75"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover	5"	1"	1'	
Packer Assembly	7"	1.53"	6'	3846'
Distributor				
Packer Assembly	7"	1.53"	6'	3852'
Flush joint anchor	5.75"	3.50"	10'	
X over	6"	2¼"	1'	
Flush Joint Anchor	4.75"	-	4'	
Pressure Equalizing Tube	5"	1"	1'	
Blanked-Off B.T. Running Case	5"	3.25"	4'	3870'
X over	5.34"	2.50"	1'	
Drill Collars				
Anchor Pipe Safety Joint				
X over	5.75"	3"	1'	
Packer Assembly	7"	1.53"	6'	3878'
Distributor				
Packer Assembly	7"	1.53"	6'	3884'
X over Double Pin	5.75"	2.50"	1'	
Anchor Pipe Safety Joint	5.75"	1.50"	4'	
X over	5.50"	2.25"	1'	
Side Wall Anchor				
Drill Collars	-	-	61'	
X over	5.50"	2.25"	1'	
Flush Joint Anchor	5.75"	3.50"	5'	
Blanked-Off B.T. Running Case	5.75"	3.50"	4'	3961'
Total Depth				3965'

FLUID SAMPLE DATA

Sampler Pressure 18 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas 0
cc. Oil 0
cc. Water 0
cc. Mud 1700
Tot. Liquid cc. 1700
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.	____ ppm
Mud Pit Sample Filtrate	____ @	____ °F.	____ ppm

Mud Weight 10.1 vis 60 sec.

Date 6-15-81 Ticket Number 185901
Kind of D.S.T. ON BOTTOM STRADDLE Halliburton Location HOBBS
Tester N. MANNEY T. GOMEZ Witness GEORGE SCOTT
Drilling Contractor WEK DRILLING COMPANY RIG # 3 DR

EQUIPMENT & HOLE DATA

Formation Tested San Andreas
Elevation 4230' GL-4241' KB Ft.
Net Productive Interval 21' Ft.
All Depths Measured From Kelly Bushing
Total Depth 3965' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 556' I.D. 2.50"
Drill Pipe Length 3186' I.D. 3.340"
Packer Depth(s) 3772-3777-3824-3829' Ft.
Depth Tester Valve 3755' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1" Adj. Bottom Choke .75"

Recovered 120 Feet of drilling mud
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Remarks See production test data sheet

TEMPERATURE	Gauge No. 731		Gauge No. 255		Gauge No.		TIME (00:00-24:00 hrs.)	
	Depth: 3756 Ft.		Depth: 3816 Ft.		Depth: Ft.			
	24 Hour Clock		24 Hour Clock		Hour Clock		Tool Opened	02:35
Est. 105 °F.	Blanked Off No		Blanked Off Yes		Blanked Off		Opened Bypass	09:06
Actual °F.	Pressures		Pressures		Pressures		Reported Minutes	Computed Minutes
	Field	Office	Field	Office	Field	Office		
Initial Hydrostatic	2157.3	2104.8	2175.2	2127.1			—	—
First Period Flow Initial	28.8	22.9	57.0	65.5			60	29
First Period Flow Final	43.2	38.7	85.5	65.5			90	91
First Period Closed in	1025.5	1019.7	1062.2	1048.0			—	—
Second Period Flow Initial	43.2	54.5	85.5	86.8			90	91
Second Period Flow Final	86.3	81.8	114.0	112.5			181	180
Second Period Closed in	1025.5	997.1	1019.8	1025.4			—	—
Third Period Flow Initial								
Third Period Flow Final								
Third Period Closed in							—	—
Final Hydrostatic	2157.3	2113.3	2157.3	2137.0				

Legal Location Sec. - Twp. - Rng. 8-8S-31E
Lease Name INGRAM FEDERAL
Well No. 18
Test No. 2
Tested Interval 3777-3824'
Lease Owner/Company Name SUNDANCE OIL COMPANY
Field Area TOM TOM
Meas. From Tester Valve
County CHAVES
State NEW MEXICO

FORM 181-R2 — PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S

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Casing perfs. _____ Bottom choke _____ Surf. temp _____ °F Ticket No. 185901
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
21:00					Picked up tools
24:20					in hole
02:35	BH				Opened tool with a weak blow
02:40	"				Increased 6" bubble hose in bucket.
02:45	"				" 8" " " " "
02:50	"				" 10" " " " "
02:55	"	1/4			"
03:00	"	1/4			"
03:05	"	1/2			Closed tool
04:35	"				Opened tool with a weak blow
04:40	"				Increased 1" bubble hose in bucket
04:50	"				No change, 1" Bubble hose in bucket.
05:00	"				Decreased, 1/2" bubble hose in bucket.
05:10	"				No change "
05:20	"				"
05:30	"				"
05:40	"				"
05:50	"				"
06:00	"				"
06:05	"				Closed tool, 1/2" bubble hose in bucket.
09:06					Opened bypass
09:15					Pulled out of hole.

PRODUCTION TEST DATA