WELL REPORT
ANDERSON OIL COMPANY
SCHRAM-HANSON FEDERAL #1
SAN JUAN COUNTY, NEW MEXICO

WELL REPORT

ANDERSON OIL COMPANY: SCHRAM-HANSON FEDERAL #1

SAN JUAN COUNTY, NEW MEXICO

LOCATION

660' from the south line and 1980' from the east line, Section 17, Township 21 North, Range 8 West, NMPM.

ELEVATION

6578' Ground: 6590' Kelley Bushing

CONTRACTOR

Young Drilling Company, Inc., Rig #1, Rotary Tools

SPUD AND COMPLETION DATA

Well commenced: July 28, 1971
Date drilling completed: August 4, 1971
Total Depth: 4795' Driller, 4787' Logger

Initial Production: Testing

CASING

8 5/8" @ 76' with 40 sacks
5 1/2" @ 4787' with 250 sacks

ELECTRICAL SURVEYS

Schlumberger - Induction Electrical Log from 77' to 4786'
Schlumberger - Formation Density Log from 4200' to 4783'
Schlumberger - Sonic Log from 4180' to 4785'

FORMATION TOPS

Cretaceous	Depth	KB Datum
Fruitland (Kf)	Surf.	+6590
Pictured Cliffs (Kpc)	220'	+6370
Lewis (Kl)	283'	+6307
Cliff House (Kch)	705'	+5885
Menefee (Kmf)	890'	+5700
Point Lookout (Kpl)	2473'	+4117
Upper Mancos (Kmu)	2578'	+4012
Gallup (Kg)	3541'	+3049
Gallup Sand (Kgs)	3590'	+3000
Lower Mancos (Kml)	3731'	+2859
Sanastee (Kms)	4034'	+2556
Greenhorn (Kgh)	4360'	+2230
Graneros (Kgr)	4408'	+2182
Dakota "A" (Kda)	4429'	+2161
Dakota "B" (Kdb)	4544'	+2046

FORMATION TOPS - CONTINUED

Cretaceous	Depth	KB Datum
Dakota "D" (Kdd)	4636'	+1954
Dakota Burro Canyon (Kdbc)	4694'	+1896
Jurassic		
Morrison (Jm)	4766'	+1824
Total Depth (Logger)	4787'	+1803
Total Depth (Driller)	4795'	

WELL CUTTINGS

10' samples from 3900' to 4795'.
Samples described below from 3900' to 4795' (Driller TD).

SAMPLE DESCRIPTION

3900-40	100% sh, gy, dk gy, gy brn, gy grn, carb, sdy in part
3940-80	100% sh, as above: Tr sltstn, gy, hd, calc
3980-90	100% sh, as above: Tr sltstn, as above: Tr ss, wht, f-g, SA-SR, arkosic, soft, abt intstl clay, N-S
3990-4000	100% sh, as above
4000-30	100% sh, as above: Tr sltstn, as above

TOP SANASTEE 4034' LOGS

4030-40	100% sh, as above: Tr ss, buff, f-g, SA-SR, arkosic, hd, tite, v/calc, N-S: Tr sltstn, as above: Tr aragonite
4040-50	100% sh, as above
4050-90	100% sh, as above, Tr dk gy, calc, sh: Tr ls, mott brn, v-f-xln, indist foss: Tr sltstn, as above
4090-4100	90% sh, as above, domin calc: 10% ls, as above: Tr sltstn, as above
4100-10	No sample
4110-20	100% sh, as above: Tr sltstn, as above: Tr ls, as above
4120-30	100% sh, as above: Tr sltstn, as above
4130-40	90% sh, as above: 10% sltstn, gy, gy brn, calc, hd
4140-90	90% sh, as above: 10% sltstn, as above: Tr ss, lt gy, f-g, SA-SR, arkosic, soft, abt intstl clay

4190-4210 90% sh, gy, dk gy, gy brn, carb, sdy in part: 10% sltstn, gy, shy, sdy in part

4210-80 100% sh, as above: Tr sltstn, gy, hd, calc in part, shy & sdy in part: Tr ss, lt gy, v-f-f-g, SA-SR, arkosic, soft, abt intstl clay, N-S

4280-90 100% sh, dk gy, gy brn, platy in part, carb in part

4290-4300 100% sh, as above, minor gy, gy grn, sh, Tr sltstn, as above

4300-20 100% sh, as above: Tr sltstn, gy, hd, silic, sdy in part

4320-30 90% sh, as above: 10% sltstn, as above, calc in part

4330-40 80% sh, dk gy, gy, gy brn, carb, platy in part: 20% sltstn, gy, hd, calc, carb inclus, sl/sdy in part

4340-50 70% sh, as above: 30% sltstn, as above

4350-60 90% sh, as above: 10% sltstn, as above

TOP GREENHORN 4360' LOGS

4360-90 80% sh, as above: 20% sltstn, as above

4390-4400 90% sh, as above, bcm calc in part: 10% sltstn, as above

TOP GRANEROS 4408' LOGS

4400-30 80% sh, as above: 10% sltstn, as above: 10% ls, mott brn, ds, shy

TOP DAKOTA "A" 4429' LOGS

4430-40 100% sh, dk gy, platy: Tr sh, as above, calc: Tr ls, as above: Tr sltstn, as above

4445 Circ samples

30" - 100% sh, as above: Tr ls, as above: Tr sltstn, as above: Tr bentonite

45" - 100% sh, as above: Tr ls, as above: Tr sltstn, as above: Abt bent: Tr ss, wht, f-g, SR, arkosic, glauc, por & friable in part, Tr intstl clay, N-S

4445-60 100% sh, as above: Tr sltstn, as above: Tr ss, as above, N-S: Tr bentonite

4460-70 90% sh, as above: 10% ss, as above: N-S, Tr uncons f-m-g, arkosic, SA-SR, N-S: Tr sltstn, as above: Tr bentonite

4470-80 80% sh, as above: 20% ss, wht, f-m-g, sl/arkosic, sl/glauc, Tr por, friable, N-S: Tr sltstn, as above: Tr bentonite

4480-90 80% sh, as above: 20% ss, as above, wht-gy, bcm sl/shy in part: N-S: Tr bentonite

4490-4500 50% ss, wht-lt gy, f-m-g, domin f-g, SA-SR, arkosic, sl/ glauc, por & friable in part, calc in part, N-S: Tr bentonite

4500-10 50% ss, as above, f-g, por & friable, sl/calc cmt, N-S: 50% sh, as above: Tr bentonite

4510-20 50% ss, wht-buff, f-g, SA-SR, sl/arkosic, sl/calc cmt, por & friable, N-S: 50% sh, as above: Tr bentonite

4520-30 30% ss, buff-lt gy, as above, bcm shy in part: 70% sh, as above: Tr bentonite

TOP DAKOTA "B" 4544' LOGS

4530-60 90% sh, as above, sdy in part: 10% ss, as above, N-S: Tr sltstn, as above, Tr bentonite

4564 Circ samples

30" - 100% sh, as above: Tr sltstn, gy, gy brn, shy, calc

45" - 20% ss, wht, v-f-f-g, sl/arkosic, SA-SR, por & friable, N-S, Tr intstl clay: 80% sh, as above, domin sdy

4564-70 50% ss, wht, v-f-f-g, domin f-g, SA-SR, sl/arkosic, por & friable, N-S: 50% sh, as above: Tr bentonite

4570-80 70% sh, as above: 30% ss, as above, bcm silic & tite in part, shy in part, N-S: Tr bentonite

4580-90 60% sh, as above: 40% ss, as above, domin por & friable, N-S: Tr intstl clay

4590-4600 70% sh, as above: 30% ss, as above, domin silic & calc, Tr por, N-S

4600-10 70% ss, as above, por & friable in part, silic & calc in part, N-S: 30% sh, as above

4610-20 90% sh, as above: 10% ss, as above, bcm shy

TOP DAKOTA "D" 4636' LOGS

4620-40 100% sh, as above: Tr ss, as above: Tr sltstn, gy, gy brn shy & calc

4646 Circ sample for Core #1

60" - 100% sh, as above: Tr ss, buff, f-m-g, SA-SR, arkosic, por, friable, lt stn, lt blue fluor, No cut

TOP DAKOTA BURRO CANYON 4694' LOGS

Core #1: 4646-4706

4706-30 100% sh, dk gy, carb: Tr ss, wht, f-m-g, SA-SR, arkosic, por & friable, intstl clay, N-S

TOP MORRISON 4766' LOGS

4730-70 70% sh, as above: 30% ss, as above

4770-80 70% sh, as above: 30% wht, cons-uncons, f-c-g, congl, Tr cht, N-S

4780-95 70% sh, as above: Tr sh, pale to med grn, wxy in part, silic in part: 30% ss, as above

TD Driller: 4795'
TD Logger: 4787'

DRILLING TIME

Five foot drilling time from 3900' to 4795' (Driller TD) is listed below.

3900-4000	10-11-12-13-12-13-11-10-12-13-15-12-13-14-12-14-14-14-11-17
4000-4100	14-17-18-17-10-10-10-9-13-14-10-8-10-8-8-9-7-6-6-5
4100-4200	8-8-9-14-15-15-15-12-19-17-30-33-22-11-13-9-7-6-6-10
4200-4300	15-18-15-13-13-11-14-18-11-11-13-9-10-11-11-10-8-9-11-10
4300-4400	11-12-13-13-13-12-13-12-10-11-16-11-15-11-16-16-19-19-18-17
4400-4500	14-15-17-13-17-20-18-12-10-10-13-8-15-13-6-8-8-8-8-12
4500-4600	9-9-14-13-17-20-20-21-21-36-32-17-6-7-10-14-8-8-20-22
4600-4700	20-24-20-20-22-23-21-24-21-Core #1
4700-4800	---12-25-8-11-25-3-3-5-2-3-3-5-11-3-3-8-5

BIT RECORD

No.	Make	Size	Type	From	To	Footage	Hours Run
1	HTC	7 7/8	OSC3	76'	1735'	1659'	8 1/2
2	HTC	7 7/8	OSCIG	1735'	2634'	899'	11 1/4
3	Sec	7 7/8	S4TJ	2634'	3182'	548'	12 1/4
4	Sec	7 7/8	S4T	3182'	3641'	459'	14
5	Sec	7 7/8	S4T	3641'	4020'	379'	13
6	HTC	7 7/8	J33	4020'	4646'	626'	30
7	Core #1			4646'	4706'	60	5 3/4
8	HTC-RR	7 7/8	J33	4706'	4795'	89'	2 1/2

TOTAL ROTATING HOURS - 97 1/4

DEVIATION RECORD

No.	Degree	Depth	Date
1	1 °	500'	7-28-71
2	1 3/4 °	1000'	7-28-71
3	2 °	1500'	7-28-71
4	2 1/4 °	1735'	7-28-71

CORE RECORD - CONTINUED

Feet	Depth	Description
1.00	4654-55	ss, lt gy, f-g, SA-SR, sl/arkosic, hd, tite, calc cmt, hairline shale lamin, N-S
1.00	4655-56	sh, dk gy, carb
1.00	4656-57	ss, lt gy, f-g, SA-SR, sl/arkosic, clay filled, hd, tite, abt sh lamin, N-S
2.00	4657-59	ss, as above, v-f-f-g, N-S
1.00	4659-60	ss, dk gy, v/shy, as above, N-S
4.5	4660-64.5	ss, wht, f-g, SA-SR, sl/arkosic, por, intstl clay, N-S, occ sh inclus & hairline lamin
.5	4664.5-65	sh, dk gy, carb
4.25	4665-69.25	ss, wht, f-g, as 4660-64.5
1.75	4669.25-71	ss, wht, f-g, SA-SR, sl/arkosic, Tr por, abt intstl clay, 25% sh blebs & sh lamin, N-S
1.00	4671-72	ss, as above, 50% sh blebs & sh lamin
7.00	4672-79	ss, wht-lt gy, f-g, SA-SR, sl/arkosic, por, Tr intstl clay, Tr sh blebs, nodules & lamin, N-S
2.00	4679-81	ss, buff, f-m-g, domin f-g, SA-SR, arkosic, por, N-S
1.75	4681-82.75	ss, as above, m-g, N-S
2.75	4682.75-85.5	ss, wht, f-m-g, SA-SR, arkosic, hd, tite, calc, w/50% sh blebs & lamin, N-S
6.50	4685.5-92	sh, dk gy, sl/carb
2.00	4692-94	ss, dk gy, v-f-g, v/calc, v/shy, hd, tite
9.00	4694-4703	sh, dk gy, sl/carb
1.00	4703-04	ss, gy, f-c-g, congl, diss pyrite, abt intstl clay, porous, N-S
2.00	4704-06	ss, wht, f-m-g, SA-SR, arkosic, por & friable, N-S
60.00		

CA-20 PRELIMINARY REPORT

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

CORE ANALYSIS RESULTS

Company ANDERSON OIL COMPANY | Formation DAKOTA "D" | File RP-2-2474
Well SCHRAM-HANSON-FEDERAL NO. 1 | Core Type DIAMOND 4" | Date Report 8-2-71
Field WILDCAT | Drilling Fluid WATER BASE MUD | Analysts RG
County SAN JUAN State NEW MEX. Elev. 6588'KB Location SW SE SEC 17-T21N-R8W

Lithological Abbreviations

SAND-SD	DOLOMITE-DOL	ANHYDRITE-ANHY	SANDY-SDY	FINE-FN	CRYSTALLINE-XLN	BROWN-BRN	FRACTURED-FRAC	SLIGHTLY-SL/
SHALE-SH	CHERT-CH	CONGLOMERATE-CONG	SHALY-SHY	MEDIUM-MED	GRAIN-GRN	GRAY-GY	LAMINATION-LAM	VERY-V/
LIME-LM	GYPSUM-GYP	FOSSILIFEROUS-FOSS	LIMY-LMY	COARSE-CSE	GRANULAR-GRNL	VUGGY-VGY	STYLOLITIC-STY	WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS (K_A)	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE OIL	RESIDUAL SATURATION PER CENT PORE TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
		CONVENTIONAL ANALYSIS				
1	4646-47	51	15.8	7.6	30.4	Sd Lt Gy Fn Grn
2	47-48	175	19.4	9.8	33.1	Sd Lt Gy Fn-Med Grn
3	48-49	87	18.4	9.3	36.9	Sd Lt Gy Fn-Med Grn
4	49-50	115	17.2	7.6	33.7	Sd Lt Gy Fn-Med Grn
5	50-51	222	18.5	9.2	34.6	Sd Lt Gy Fn-Med Grn
6	51-52	187	18.0	8.3	43.3	Sd Lt Gy Fn-Med Grn
7	52-53	112	16.3	9.2	33.2	Sd Lt Gy Fn-Med Grn
8	53-54	85	17.9	6.2	36.3	Sd Lt Gy Fn Grn
9	54-55	67	17.6	6.3	35.2	Sd Lt Gy Fn Grn
10	4660-61	6.0	19.5	0.5	58.5	Sd Lt Gy Fn Grn Sl/Clay Carb
11	61-62	0.8	16.5	0.6	53.9	Sd Lt Gy Fn Grn Sl/Clay
12	62-63	4.3	18.8	0.5	52.1	Sd Lt Gy Fn Grn Sl/Clay
13	64-64	2.7	20.1	0.1	47.2	Sd Lt Gy Fn Grn Sl/Clay Carb
14	64-65	2.3	15.0	0.7	54.0	Sd Lt Gy Fn Grn Sl/Clay Carb
15	65-66	7.0	18.0	0.6	54.3	Sd Lt Gy Fn Grn Sl/Clay
16	66-67	17	20.3	0.5	56.1	Sd Lt Gy Fn Grn Sl/Clay Carb
17	67-68	19	18.1	0.0	52.5	Sd Lt Gy Fn Grn Sl/Clay
18	68-69	19	18.8	0.5	49.4	Sd Lt Gy Fn Grn Sl/Clay
19	4672-73	12-	18.1	0.0	56.6	Sd Lt Gy Fn Grn Sl/Clay Carb
20	73-74	11	21.9	0.0	47.0	Sd Lt Gy Fn Grn Sl/Clay Carb
21	74-75	4.3	17.7	0.6	58.1	Sd Lt Gy Fn Grn Sl/Clay Carb
22	75-76	19	18.4	0.5	56.0	Sd Lt Gy Fn Grn Sl/Clay
23	76-77	41	16.5	0.0	32.7	Sd Lt Gy Fn Grn Sl/Clay
24	77-78	16	18.3	0.5	51.8	Sd Lt Gy Fn Grn Sl/Clay Carb
25	78-79	44	17.2	0.0	56.9	Sd Lt Gy Fn Grn
26	79-80	60	18.4	0.5	51.6	Sd Lt Gy Fn-Med Grn Sl/Clay
27	80-81	104	20.2	0.0	52.0	Sd Lt Gy Fn-Med Grn Sl/Clay
28	81-82	76	16.8	0.0	61.2	Sd Lt Gy Fn-Med Grn Sl/Clay
29	82-83	112	17.6	0.0	54.0	Sd Lt Gy Med Grn Clay
30	4703-04	1.2	15.1	0.0	68.1	Sd Gy Med Grn Clay
31	04-05	152	15.5	0.0	34.2	Sd Gy Med Grn Clay
32	05-06	0.6	7.0	0.0	47.1	Sd Lt Gy Fn Grn Siliceous

DRILLSTEM TEST RECORD

SP DST #1: 4642-57 (Dakota "D")
4634-49 (Adjusted to logs)

Open 23 minutes: strong blow air immed; gas to surface 2", ggd 490 MCF; mud spray 13"; oil to surface 20"

Shut in 50 minutes:

Open 75 minutes: flow oil 7"; ggd 800 MCF, 40 BOPH, Grav 47 (corr)

Shut in 215 minutes:

Reversed out recovery

Initial hydrostatic pressure	2096 psi
Final hydrostatic pressure	2220 psi
Initial flow pressure (1)	431 psi
Final flow pressure (1)	773 psi
Initial flow pressure (2)	705 psi
Final flow pressure (2)	791 psi
Initial shut in pressure	1973 psi
Final shut in pressure	1982 psi

Bottom Hole Temperature - 131°F

Bottom Hole Sampler: 250 psi; 131°F
1100 cc oil; 5 CFG
No mud; no water

SUMMATION

This well was spudded July 28, 1971, and 5½" casing was set to total depth August 4, 1971. The well was drilled to a total depth of 4787' Logger: 4795' Driller, in the Morrison formation of Jurassic age. A total of 97 1/4 rotating hours were required for the drilling of this test.

All formations from 3900' to 4795' (Driller TD) were evaluated by (1) careful examination of rotary cuttings by a geologist in the field; (2) the entire stratigraphic section was evaluated by qualitative and quantitative analysis of the electrical surveys. A core was cut in the Dakota "D" and Dakota Burro Canyon zones (4646-4706). Examination of the core revealed an oil saturated section in the top of the Dakota "D" zone (4646-54). A drillstem test was run 4642' to 57'. Oil flowed at the rate of 40 BOPH, 47° Gravity, gas guaged 800 MCF. The pressures and detailed drillstem test data are recorded in the text of the report. The other prospective zones in the well calculated water or high clay content from the electrical surveys.

The well ran structurally 13' lower than the Davis Oil Company: Snake Eyes #1, located in Section 20, Township 21 North, Range 8 West, San Juan County, New Mexico, on top of the Dakota "D" zone.

Rotary samples from 3900' to total depth were saved by Anderson Oil Company. Core analysis was conducted by Core Lab of Farmington and a copy of the analysis is included in the text of the report. An Induction Electric Log was run from surface to total depth. A Formation Density and Sonic Log were run across the Dakota formation.

Dave M. Thomas, Jr.
CPG 914