

THE COLTON COMPANY

1022 MIDLAND SAVINGS BUILDING

Denver, Colorado 80202

EARL G. COLTON
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JUL 24 1981

COLORADO OIL & GAS CONS. COMM.

SAN ANTONIO
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GEOLOGICAL REPORT

ON

COLTON CO. - NO. 1 CARLSON

NE NW Section 22

T3S, R61W

660' FNL, 1980' FWL

Wildcat

Adams County

Colorado

DVR	
FJP	
HHM	✓
JAM	✓
JJD	✓
RLS	
CGM	

STATUS

WOCT

NET EFFECTIVE PAY

4 Feet

SPUD DATE

5/05/81

COMPLETED DRILLING

5/12/81

TOTAL DEPTH

6830 driller, 6836 log

ELEVATION

5080 Gr., 5090 K.B.

LOGS

Schlumberger: Induction SFL,
Gamma Ray-Neutron-Density

CORES

None

DRILLSTEM TESTS

No. 1: 6760 - 80, J₄ Sand

SURFACE CASING

5 jts. 24 lb. 8-5/8" @ 190' KB

PRODUCTION CASING

181 jts. 10.5 & 11.6 lb. 4-1/2"
@ 6836' KB

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LOG TOPS

T/Fox Hills	370 (+4720)
B/Fox Hills	536 (+4554)
Hygiene	3874 (+1216)
Niobrara	5896 (-806)
Carlile	6300 (-1210)
D Sand	6678 (-1588)
J Sand	6734 (-1644)

DRILLSTEM TESTS

No. 1: 6760 - 80, J4 Sand

Open 90 mins., Shut in 120 mins.

Very weak blow for 15 mins., began increasing, on bottom of bucket in 45 mins., 9 oz. blow in 90 mins.

Recovered: 1034' very slightly gas cut mud

IFP	583
FFP	527
SIP	1855

IHP	3512
FHP	3507
Temp.	173°

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Initial hydrostatic curve shows evidence of hitting bridges going in hole - tool may have opened. Flow pressure curve should have started at very low level then climbed up to 527 psi level. Tool probably had most of the 1034' of mud already in before test was commenced.

SAMPLE DESCRIPTION
(not lagged)

- 6650 - 60 grey shale
- 70 grey shale
- 80 grey shale
- 90 grey shale
- 6700 sandstone, wt-lt gry, VFG, clean to sli clayey, mod. P&P, no show.
- 10 silty sandstone to sandy siltstone, tite, no show.
- 20 s/silty sandstone, as above, mostly shale
- 30 shale
- 40 shale
- 50 shale
- 60 siltstone, sandy, grey, fairly hard, no show.
- 70 sandstone, VVFG, silty, clayey, tite, no show.
- 80 sandstone, lt. gry, VFG, fairly clean, fairly hard, lo P&P, no visible stain, bright yellowish white fluor., light cut from crushed clusters.
- 90) sandstone, as above, good fluor., lite cut.
- 6800) also sandstone, VVFG, silty, clayey, tite, no show.
- 10 s/sandstone w/show as above.
- mostly med. gry, VVFG sandstone, clayey, glauconitic, dark inclusions, tite, no show.
- 20 sandstone, as above.
- 30 sandstone, lt gry, VVF-VFG, clayey, silty, lo P&P to tite, no show.
- 6830 circ. 30" sandstone, as above, no show.
- 6830 circ. 60" sandstone, as above, no show.

DRILLING DATA

- 5/05/81 Spudded at 1:00 p.m.; drilled 196' of 12-1/4" hole; set 5 jts. 24 lb. 8-5/8" csg. at 190' KB w/230 sx reg. cement, 3% CaCl₂; PD @ 5:30 p.m., good returns.
- 5/06/81 Drilling at 1300'; Bit #1, water
- 5/07/81 Trip at 3615' for Bit #2; water
- 5/08/81 Drilling at 4445'; Bit #3; water
- 5/09/81 Drilling at 5065'; Bit #3; water
- 5/10/81 Drilling at 6200'; Bit #4; mud
- 5/11/81 Trip at 6677' for Bit #5; mud vis 35, wt. 9.6, w.l. 8
- 5/12/81 TD 6830; coming out of hole to log; mud vis 77, wt. 9.8, w.l. 5.2
- 5/13/81 Ran Schlumberger logs; log TD 6836; ran DST #1 6760-80.
- 5/14/81 TD 6836'; went in hole, conditioned to run casing, laid down drill pipe; ran 181 jts. new 10.5 & 11.6 lb. 4-1/2" csg., tested to 4000 & 4900 psi, set at 6836' KB w/150 sx 50-50 pozmix, 2% gel, 10% salt, 3/4% CFR₂; PD @ 2:00 a.m.; float did not hold, held pressure on casing four hours; released rig at 6:00 a.m.; WOCT.

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DEVIATION

10	@	3615'
0		
1	@	4538'
0		
1	@	6677'

BIT RECORD

1. Smith	DT-J	196 - 3615 (3419')	20 hours
2. Hughes	J-2	- 3810 (195')	2-1/4 hours
3. Smith	DT-J	- 4538 (707')	9 hours
4. Hughes	J-1	- 6677 (2139')	47 hours
5. Hughes	J-33	- 6830 (153')	18-1/2 hours

CONTRACTOR

Toltek Drilling Co., Rig 3
Denver, Colorado

Clark R. Colton

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WELL COMPLETION

COLORADO OIL & GAS CONS. COMM.

NO. 1 CARLSON

NE-NW SECTION 22-3S-61W

Adams County, Colorado

May 13, 1981: Ran 181 jts, 4-1/2" OD, 8rd, 10.5# and 11.6#, 4000# and 4900# test casing, ST&C, LT&C, Rge. 2 and 3. 6831.95'. Set at 6835'. Cemented with 150 sacks 50-50 Pozmix, 2% gel, 10% salt, 3/4-1% CFR-2. Plugged down at 2:00 a.m., May 14, 1981. Float valve did not hold, left 700 psi on casing, released pressure at 6:00 a.m. Circulated and washed casing 85' to bottom. Placed Halco Rotating Wall Cleaners from 6815' through 6715'. Placed Halco 4-1/2" Casing Centralizers at 6826', 6776', 6747', 6720', 6691', 6661', 679'. A 4-1/2" Halco Cement Basket is at 675'. A 4-1/2" OD, 8rd, Otis Sliding Sleeve Assembly is at 638'. Displaced cement plug with 30 bbls, 2% KCl water. Tested plug to 2000 psi.

Casing Detail:

Bottom:	.71'	4-1/2", OD, 8rd, Halco Regular Cement Guide Shoe
Next:	29.77'	1 jt, 4-1/2" OD, 8rd, 11.6#, 4900# test casing, LT&C, Rge. 2
Next:	1.64'	4-1/2" OD, 8rd, Halco Automatic Fill Float Collar
Next:	1387.31'	47 jts, 4-1/2" OD, 8rd, 11.6#, 4900# test casing, LT&C, Rge. 2
Next:	4777.03'	117 jts, 4-1/2" OD, 8rd, 10.5#, 4000# test casing, ST&C, Rge. 3
Next:	1.27'	4-1/2" OD, 8rd, Otis Sliding Sleeve Assembly.
Next:	578.27'	14 jts, 4-1/2" OD, 8rd, 10.5#, 4000# test casing, ST&C, Rge. 3
Next:	59.37'	2 jts, 4-1/2" OD, 8rd, 11.6#, 4900# test casing, LT&C, Rge. 2
	6835.57'	

May 23, 1981: Ran Gamma Ray, Casing Collar Correlation and Acoustic Cement Bond Logs. PBTD: 6785'. Good cement bond. Cement top: 6088'.

June 17, 1981: Moved in Yetter Well Service, stuck on spongy location. Unloaded tubing, pulled unit to wellhead. Ran 2" EUE tubing, with Otis sleeve shifting tools. Opened sleeve, spotted 500 gallons Angel through sleeve, closed and tested to 500 psi. Pulled tubing. Shut well in.

June 18, 1981: Swabbed rough casing to 2500'. Perforated the interval 6767' through 6770' with 13 holes DML jet charges. Ran 222 jts, 2" EUE tubing with a Baker Model "R" Packer. Set packer at 6725'. Swabbed tubing to bottom. No shows. One run off bottom recovered a trace of oil in 150' fluid. Shut well in.

June 19, 1981: No tubing or casing pressure. Ran swab twice, unable to recover any fluid. Estimate 30' fluid on bottom. Pumped 250 gallons, 7-1/2% MCA acid on bottom, followed with 2% KCl water with 2 gallons HiFlo. Pressured formation, in stages, to 3500 psi with no break. Released packer, ran 2 jts tubing, spotted acid, reset packer. Broke formation at 2400 psi. Displaced 3 bbls acid at 1/2 BPM, 1200 psi. Let set 5 minutes. Displaced remaining 3 bbls acid and 24 bbls treated 2% KCl water at 1 BPM, 1400 psi; 2 BPM, 1800 psi; 3-1/2 BPM, 2100 psi. ISIP: 1400 psi to 700 psi in 5 minutes. Released pressure, began swabbing back 56 BTLW. Had approximately 36 BLW back at 1:00 p.m. One hour swab recovered 1 BTF, trace oil and gas. Hooked up Halliburton. Pressured annulus to 500 psi. Fraced with 26,000 gallons 40# Versa Gel, 2000# 100 mesh sand and 32,000# 20/40 mesh sand at 6 BPM continuous rate. Average pressure, 3100 psi. Maximum pressure 4000 psi. ISIP: 2150 psi to 1380 psi in 15 minutes. Shut well in. 778 BTLW to recover.

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June 20, 1981: No tubing pressure, fluid level at 1000'. Swabbed 22 BLW to 9:30 a.m. with 500' fluid fillup on each run. Hit sand bridge at 4500', stuck swab. Worked swab 1-1/2 hours, unable to free. Wait on water truck and sand line cutter. Cut off line at swab. Shut in, will pull tubing Monday.

June 21, 1981: Well shut in.

June 22, 1981: No wellhead pressure. Swabbed tubing down to fish. Released packer, pulled tubing. Ran a Hydrostatic Sand Baller, cleaned out 65' sand to hard bottom. Estimate PBD: 6800'. Pulled tubing, dumped sand. Ran tubing, set at 6655'. Shut well in. 842 BTLW remaining to recover.

June 23, 1981: Retrieved swab from tubing joint. No wellhead pressure. Fluid level at 2200'. Had 50 BLW back to noon with fluid level at 3800'. Recovered 113 BTLW today, no oil show, trace of gas in fluid. Fluid level at 4200'. Swabbing off bottom. Shut well in.

June 24, 1981: 80 psi on tubing, 60 psi on casing. Beginning fluid level 2200'. Swabbed 10 hours. Recovered 113 BTLW today, 1 bbl oil. Swabbing fluid level at 5000'. Oil show began as trace and increased to approximately 3% on last swab. Casing pressure increased to 140 psi. Did not check for sand fillup. Shut well in. 568 BTLW to recover.

June 25, 1981: 280 psi on tubing, 380 psi on casing. Beginning fluid level at 2400'. Estimate 50% oil in first swab run. Slow swab rate later in day as fluid level lowered. Annulus pressure declined to 180 psi. Oil percent increased to 30%. Recovered 81 BTF today. 57 BLW, 24 Bbls oil. Shut well in. 559 BLW to recover.

June 26, 1981: 360 psi on tubing, 490 psi on casing. Fluid level at 2500'. Recovered 26 BTF in swab down, 25% oil. Second hour swabbing, 17 BTF, 80% oil. Third hour swabbing 3 BTF, 60% oil. Rate stabilized at 4 to 5 BTFH, 50% oil. Recovered 77 BTF today, average 60% oil. Lowered tubing, checked sand fillup, estimate 38'. Sand in perforations. Shut well in. Estimate 46 Bbls oil, 31 BLW recovered. 528 bbls or 37% total load recovered.

June 27, 1981: Released 360 psi on tubing and 300 psi on casing. Pulled tubing, ran a Hydrostatic Bailer, cleaned out approximately 25' frac sand and 15' Rotary Mud off bottom. Waited several times for casing to stop flowing. Shut well in with 60 psi on casing, waited for fluid to drop. Let well die to run tubing for production.

June 28, 1981: Well shut in.

June 29, 1981: 300 psi on casing. Pressure would not bleed down without unloading fluid. Al's Hot Oil Service killed well with 50 bbls frac fluid from test tank. Ran 2" EUE tubing and sucker rod string for production. Released well completion unit.

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Tubing Detail:

Bottom:	30.00'	1 jt, 2", EUE, 8rd, 4.7#, J-55 tubing, EUE cut off.
Next:	3.85'	2" EUE, 8rd, perforated tubing nipple.
Next:	1.12'	2", 8rd, pump seating nipple.
Next:	91.33'	3 jts, 2" EUE, 8 rd, 4.7#, J-55 tubing.
Next:	3.45'	2" 8rd x 4-1/2" Baker anchor catcher.
Next:	6645.25'	220 jts, 2" EUE, 8rd, 4.7#, J-55 tubing.
	6775.00'	Tubing set at 6780', 20' off bottom. Tubing Anchor Catcher set at 6653', 20,000# tension

Sucker Rod Detail:

Bottom:	18'	2" x 1-1/2" x 16' RWBC rod pump w/6' gas anchor.
Next:	4075'	163 - 3/4" x 25' sucker rods.
Next:	2625'	105 - 7/8" x 25' sucker rods.
Next:	16'	7/8" x 8', 7/8" x 6', 7/8" x 2' pony rods.
Next:	15'	1-1/4" x 22' common steel polished rod w/7' steel liner
	6749'	

	Water	Oil	
7/7 On Pump 105/min	82	—	
7/8 ✓	27	12	
7/9 ✓	29	8	
7/10 ✓	32	10	
7/11 ✓	33	8	
7/12 ✓	21	4	
7/13 ✓	38	8	
7/14 ✓	38	8	
	295 B	58 B (1.62)	To Receiver 483 Bbls