



## GEOLOGICAL DATA AND DRILLING AND COMPLETION PROCEDURE

FORMATION OR DATE	TOP-DEPTH INTERVAL	REMARKS OR DESCRIPTION AND RESULTS OF WORK
		<u>DRILL STEM TEST RECORD</u>
	DST No. 1	Interval 1990-2048 ft. KB Zone One, Piceance Creek Sand  IHMP 971 psig ICIP 482 - 30 minutes IFP 42-65 FFP 60-86 FCIP 406 - 30 minutes PHMP 971  Tool opened for 5 minutes for first flow. Rotated tool for ICIP. Tool opened with a very weak blow which died in 55 minutes. Recovered 30 feet of drilling mud. Mud had 20% or better of sawdust lost circulation material and tools were plugging. No indications of gas or oil. Bottom hole temperature was 108°F.
	DST No. 2	Interval 6842-6900 ft. KB Mesa Verde  IHMP 3447 psig ICIP 243 - 30 minutes IFP 63 FFP 61-39 FCIP 141 - 30 minutes PHMP 3419  Tool opened for 5 minutes first flow. Rotated tool for ICIP. Tool opened with a strong blow for 90 minutes flow period. Recovered 5 ft. of drilling mud. No indications of oil or gas to surface.
	DST No. 3	Interval 6900-7117 ft. KB Mesa Verde  IHMP 3457 psig ICIP 362 - 30 minutes IFP 248-69 FFP 94-82 FCIP 156 - 30 minutes PHMP 3435  Tool opened for 5 minutes first flow. Rotated tool for ICIP. Tool opened with strong blow, gas to surface. Gas burned with a 2 ft. flare for 3 hours. Could not measure gas flow. Gas sample taken. Recovered 105 ft. of gas cut drilling mud; one inch top and bottom choke.
	DST No. 4	Interval 7050-7300 ft. KB Mesa Verde  Misrun. No pressures. Tools were set and opened for 1 minute the sidewall anchor tool gave way disengaging pressure syllis. Tools raised and lowered 150 ft, but unable to get packer seat. Recovered 105 ft. drilling mud.
	DST No. 5	Interval 7310-7497 ft. KB. Mesa Verde  Misrun. Unable to get packer seat.
		<u>CORE RECORD</u> No cores cut.
		<u>CASING RECORD</u> Surface
		1 ft Baker guide shoe 436 ft 15 jts, 8-5/8", 24#, 8Rt, J-55, ST&C casing 1 ft Below ground 11 ft KB to ground 449 ft KB setting depth
WELL	Pawn Creek Unit	AREA Colorado

Cemented with 150 sacks Ideal  
bulk cement with 2% Ca Cl<sub>2</sub>. Cement  
circulated to surface. Cement set 12  
hours, was tested at 800 psig for 30  
minutes and held O.K.

FORMATION TOP\*DEPTH  
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## Production

2 ft.	Howco Float Shoe
33 ft.	1 jts., 5-1/2", 17#, J-55, LT&C casing
2 ft.	Howco Differential Fill-up Collar
294 ft.	9 jts., 5-1/2", 17#, J-55, LT&C casing
127 ft.	5 jts., 5-1/2", 17#, J-55, ST&C casing
7029 ft.	226 jts., 5-1/2", 15.5#, J-55, ST&C casing
11 ft.	KB to ground
7498 ft.	KB setting depth

Cemented with 482 sacks 50/50 Posmix containing 2% gel, 5,025 lbs Gilsontite and 8,700 lbs salt. Cement set 24 hrs, was tested at 1200 psig for 30 minutes and held O.K.

## COMPLETION DATA

Ran cement top log and found cement top in annulus at 5840 ft. KB. Ran gamma ray correlation and collar log and perforated 8 holes each at 6800 ft. KB and 7140 ft. KB, gamma ray correlation log measurements. Ran tubing and Howco RTTS tool and set at 7020 ft. Attempted to circulate between perforations, but would not circulate. Put 1000 psig on annulus. Broke down perfs at 7140 with 5 bbls water. Broke from 2900 to 2000 psig. Spot cement in tubing at 6000 ft. while circulating from by-pass. Close by-pass and squeeze cement. Displaced 13-1/2 bbls. cement. Pressured to 4000 psig and held for 5 minutes, then reversed out excess cement. One-half bbl. cement in perfs. Pressured back to 4000 psig. Let set 15 min. Held O.K.

Moved RTTS tool to 6700 ft. KB. Broke down perfs at 6800 with 5 bbls water. Broke from 3200 to 2100 psig. Mixed cement and spotted at 6000 ft in tubing.. Closed by-pass and squeezed 16 bbls cement. Pressured to 4000 psig. Reversed out excess cement; 3-1/2 bbls cement in perfs. Pressured back to 4000 psig. Held pressure, for 15 min. Pulled tubing.

Ran tubing and bit and drilled out cement plugs to PBTD 7120 ft. KB. Found top of first plug at 6671 and drilled to 6810. Found top of second plug at 7110 and drilled to 7120. Circulated clean and pulled tubing.

Ran tubing with notching tool. Pressure tested casing and BOP to 2000 psig for 30 minutes and held O.K. Cut notches at 6980, 7005, 7044, and 7084 ft. KB, Schl. gamma ray-sonic log measurements. All notched out using 45 sacks sand each and water containing 5% CaCl<sub>2</sub>. Surface pressure was 3000 psig and jet pressure was 2000 psig. Pumped 30 minutes per notch. Cleaned out sand to 7110 ft. KB. Pulled tubing and notch tool.

WELL Fawn Creek Unit FIELD Fawn Creek AREA Colorado

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Sand fraced down casing as follows:

Broke down with 5% Ca Cl<sub>2</sub> water at 2500 psig. Fraced with 100,000 lbs. 20-40 mesh sand and 77,000 gals. 5% Ca Cl<sub>2</sub> water gelled with 3,350 lbs. WG-4 and 2850 lbs CW-1 and flushed with 7,350 gals. 5% Ca Cl<sub>2</sub> water. Sand was increased in concentration from 3/4 to 3 lbs. per gal. during job. Pressure at shut-down was 1800 psig which dropped immediately 1100 psig, and bled to 700 psig in 30 minutes. Let well set for 1 hour then tried to bleed off pressure. Well flowed back hard. Shut in to wait for stripper bowl to run tubing.

Ran 2-3/8 inch EUE tubing with disc and set at 6,967 ft. KB. Installed wellhead equipment. Broke tubing disc and swabbed well for 4 hours. Well began to flow back frac wafer and gas. Well was alternatley blown down and shut in prior to testing. Shut well down.

WELL Fawn Creek Unit FIELD Fawn Creek AREA Colorado