

103-08364



00314958

NORTHWEST EXPLORATION

#23 Philadelphia Creek
Sec. ~~43~~, T2S, R101W
Rio Blanco County
Colorado

October 9, 1979

Approved by

Gustavson Associates

EXPLORATION

EVALUATION



MAILING ADDRESS
2111 30TH STREET
BOULDER COLORADO 80301

TELEPHONES
Rocky Mountain & Southwestern Region (303) 443-2209

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DATA SHEET

Operator Twin Arrow Drilling Company
Well Philadelphia Creek #23
Location 1832' FNL and 600' FEL, Sec. 14, T2S, R101W
Elevation 6527 G.R.
Spud September 25, 1979
Finish Drilling September 30, 1979
T.D. 3710'
Hole 12-1/4" to 142'
6-3/4" to 3710'
Logs DIL CNL-FDC-Welex, Vernal, Utah
Casing 8-5/8" K-55 24 lb STC
2-7/8" Tubing 6.4 lb
Rig Twin Arrow Drilling Company, Rangely, Colorado
Rig #6
Cardwell Rig 6000 foot trailer mast
Compressors 1 Quincy 850, 1 Joy 850, Joy Booster
Joy Mist Pump
Tool Pusher Gale Covington
Drillers Bill Young, John Weeks, Carl Asher
Geologist Bruce Journey

CHRONOLOGY

<u>Date</u>	<u>Depth 7:00 a.m.</u>	
September 25		Spudded, drilled to 142'
September 26	142	Set Surface casing, cemented
September 27	251	Drilling
September 28	1082	Drilling
September 29	2694	Drilling
September 30	3710	Drilling to T.D., ran logs, set casing tubing, cemented

FORMATION TOPS
(From Electric Logs)

Elevation 6534 K.B.

Mesa Verde	Surface
Mancos	1673
Mancos "A"	2058
Mancos "B"	3083
T.D.	3710

SUMMARY OF FLARES

<u>Depth</u>	<u>Duration</u>	<u>Length</u>
3310-3349	15 minutes	12-20' long
710-3170 (Trip Gas)	Constant flare	20' long

depth to	SAMPLE DESCRIPTION	date: Sept. 27, 1970 page: 1 of 5
130 160	Well: PHILADELPHIA CREEK # 23 95% Casing cement; SHALE dark gray, slightly fissile 5%	
160 190	Sandstone dark gray, pyrite cement, subrounded, medium grained, medium sorted 75%; Shale dark gray, slightly fissile 25%; Abundant casing cement	
190 220	Shale dark gray, coarsely fissile, carbonaceous flakes 100%	
220 250	Same as above; Abundant casing cement	
250 280	Same as above	
280 310	Shale dark gray, coarsely fissile, trace carbonaceous flakes 100%	
310 340	Same as above	
340 370	Same as above (slightly damp)	
370 400	Coal 95%; SANDSTONE light gray, fine grained, well sorted, subangular, slightly calcareous	
400 430	Shale dark gray, coarsely fissile, trace carbonaceous 100%	
430 460	Same as above	
460 490	Same as above	
490 520	Same as above with scattered coal streaks	
520 550	Shale as above 75%; SANDSTONE light gray, fine grained, well sorted, subrounded, calcareous 25% - scattered coal streaks	
550 580	Same as above	
580 610	Shale dark gray, coarsely, coarsely fissile 85%; Sandstone as above 15%; Coarsely streaks	
610 640	Shale as above 70%; SANDSTONE as above 30%; Coarsely Streaks	
640 670	Sandstone as above 60%; Siltstone light gray, slightly argillaceous, calcare- ous 30%; Shale as above 10%	
670 700	Siltstone as above 70%; Sandstone light gray, friable, medium grained, well sorted, subrounded, good porosity 20%; Shale dark gray, as above 10%	
700 730	Siltstone as above 75%; Shale dark gray 25%	
730 760	Shale dark gray, slightly fissile + calcareous 60%; Sandstone light gray, salt + pepper, fine grain, well sorted, subrounded, carbonaceous flakes 40%	
760 790	Same as above	
790 820	Shale dark gray, slightly fissile 90%; Sandstone as above 10%	
820 850	Shale as above 75%; Sandstone - loose grains	

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depth to	SAMPLE DESCRIPTION Well: Philadelphia Creek 23	date: Sept 28, 1979 page: 2 of 5
	continued subrounded, well sorted, medium grained	
850 880	Sandstone light gray, salt + pepper, sub rounded, well sorted, medium grained, good porosity, friable, black minerals 75%; Shale dark gray, coarsely fissile 25%	
880 910	Shale as above 75%; Sandstone as above 25%	
910 940	Shale as above 60%; Sandstone light gray, salt + pepper, fine to medium grain, well sorted, subrounded, 40%	
960 990	Same as above	
990 1020	Shale as above 70%; Sandstone as above 20%; Siltstone brown, argillaceous 10%	
1020 1050	Sandstone light gray, salt + pepper, friable, some loose grains, subrounded, well sorted, medium grained, good porosity 100%	
1050 1080	Shale dark gray, coarsely fissile, slightly silty 75%; Sandstone light gray, slightly salt + pepper, fine grained, well sorted, subrounded, shale partings 25%	
1080 1110	Shale as above 90%; Sandstone as above 10%	
1110 1140	Shale as above 60%; Sandstone as above 40%	
1140 1170	Shale as above 75%; Sandstone as above 25%	
1170 1200	Shale as above 100%	
1200 1230	Shale as above 75%; Sandstone as above 25%	
1230 1260	Shale as above 60%; Sandstone light gray, slightly salt + pepper, slightly friable, subrounded, well sorted, medium grained, good porosity	
1260 1290	Same as above	
1290 1320	Shale as above 90%; Sandstone as above 10%	
1320 1350	Shale as above 75%; Sandstone light gray, slightly salt + pepper, fine grained, well sorted, subrounded, poor porosity, shaley streaks 25%	
1350 1380	Same as ABOVE	
1380 1410	Shale dark gray, coarsely fissile 60%; Sandstone light gray, salt + pepper, medium ^{clayey} to fine grained, well sorted, subrounded, light brown, "blebs" in the sandstone ^{slightly friable} 40%	
1410 1440	Sandstone as above 80%; shale as above with trace "brownish" blebs" 20%	
1440 1470	Sandstone: loose grains, light gray, subrounded, well sorted, medium grain, good porosity 100%	
1470 1500	Sandstone as above with consolidated pieces 70%; Shale as above 30%	

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depth to	SAMPLE DESCRIPTION	date: Sept 28 page: 3 of 5
1500 1530	Sandstone light gray-white, friable, subrounded, well sorted, medium grained 70%; Shale dark gray, coarsely fissile trace <i>Inoceramus</i> prisms 30%	
1530 1560	Sandstone light gray, salt + pepper, fine grained, well sorted, subrounded 60%; Shale as above 40%	
1560 1590	Sandstone as above, light to dark gray, shale streaks 90%; Shale as above 10%	
1590 1620	Same as above	
1620 1650	Same as above	
1650 1680	Shale as above 70%; Sandstone light gray, slightly friable, fine to medium grained well sorted, subrounded 30%	
1680 1710	Shale as above 60%; Sandstone as above with occasional glauconite 40%	
1710 1740	Same as above	
1740 1770	Shale as above, silty, 80%; Sandstone as above 20%	
1770 1800	Shale as above 80%; Sandstone as above 10%; Siltstone light brown, argillaceous, 10%	
1800 1830	Shale as above 100%	
1840 1870	Same as above	
1870 1900	Shale as above 90%; Siltstone dark gray, argillaceous 10%	
1900 1930	Same as above	
1930 1960	Same as above	
1960 1990	Same as above	
1990 2020	Same as above	
2020 2050	Same as above	
2050 2080	Shale as above with carbonaceous flakes 60%; Sandstone light to dark gray, s+p, somewhat friable, subrounded, well sorted, medium grained, trace glauconite, argillite 40%	
2080 2110	Shale as above 60%; Sandstone light gray, fine grain, well sorted, subrounded 40%	
2110 2140	Same as above with shaley streaks in sandstone	
2140 2170	Shale as above 75%; Sandstone as above 25%	
2170 2200	Shale as above 60%; Sandstone as above 40%	
2200 2230	Shale as above 80%; Sandstone as above 20%	
2230 2260	Shale as above 60%; Sandstone as above 20%; Siltstone dark gray, argillaceous, slightly sandy 20%	
2260 2290	Shale as above 60%; Siltstone as above 40%	

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depth to	SAMPLE DESCRIPTION	date: Sept. 29 page: 4 of 5
2290 2320	Well: Philadelphia Creek 23 Shale dark gray, coarsely fissile, silty 70%; Siltstone dark gray, argillaceous, trace sandy 20%; Sandstone light gray, unsorted, well sorted, medium grained, trace pyrite, micas: frigate 11%	
2310 2350	Shale as above 75%; Siltstone as above only sandy 25%	
2380 2380	Same as above	
2380 2410	Shale 70%; siltstone 10%	
2410 2440	Same as above	
2440 2470	Same as above	
2470 2500	Same as above	
2500 2550	Same as above	
2550 2580	Same as above	
2580 2610	Same as above	
2610 2640	Same as above	
2640 2670	Same as above	
2670 2700	Same as above	
2700 2730	Same as above	
2730 2760	Same as above	
2760 2790	Same as above	
2790 2820	Same as above	
2820 2850	Same as above	
2850 2880	Same as above	
2880 2910	Same as above	
2910 2940	Same as above	
2940 2970	Same as above	
2970 3000	Same as above	
3000 3030	Same as above	
3030 3060	Same as above	
3060 3090	Same as above	
3090 3120	Same as above	
3120 3150	Same as above	
3150 3180	Same as above	
3180 3210	Same as above	
3210 3240	Same as above	
3240 3270	Same as above	
3270 3300	Same as above	

depth to	SAMPLE DESCRIPTION	date: Sept 29 page: 5 of 5
3100 3130	Well: Philadelphia Creek 23 shale dark gray, coarsely fissile, silty 80%; Sandstone light gray, slightly salt pepper, medium grain, medium sorted, subrounded, rare glauconite, no porosity	
3130 3160	Same as above	
3160 3190	Same as above	
3190 3220	Shale as above 60%; Sandstone light gray, slightly salt+pepper, fine to medium grain, well sorted, subrounded, no visible porosity 40% shaley streaks faint yellow fluorescence	
3220 3250	Sandstone as above 70% faint yellow fluorescence; Shale as above 30%	
3250 3280	Shale as above 60%; Sandstone as above 40% no fluorescence	
3280 3310	Sandstone as above 60% slight yellow fluorescence; Shale as above 40%	
3310 3340	Same as above except yellow fluorescence	
3340 3370	Same as above with thin silicious sandstone - white - one chip	
3370 3400	Sandstone as above 60%; Shale as above 40% lt yellow fluorescence	
3400 3430	Same as above yellow fluorescence	
3430 3460	Sandstone 75% ^{yellow} fluorescence; Shale dark gray, coarsely fissile 25%	
3460 3490	Same as above with streaming cut, yellow fluorescence	
3490 3520	Same as above, sandstone somewhat friable, light yellow fluorescence	
3520 3550	Same as above	
3550 3580	Sandstone as above also dark gray, shaley streaks 60%; Shale as above 40% <small>no fluorescence</small>	
3580 3610	Shale dark gray, coarsely fissile, calcareous 90%; Sandstone as above 10%, no fluorescence (fine grain, well sorted, subrounded, slightly calcareous.)	
3610 3640	Same as above	
3640 3670	Same as above	
3670 3700	Same as above	

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