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MAY 17 1996

COLORADO OIL & GAS COMMISSION

AMOCO EXPLORATION COMPANY
NO.1-26 DICK'S BROWN
SW SE SEC.26-T15S-R43W
CHEYENNE COUNTY COLORADO

WELLSITE GEOLOGY
BY
RSAY ENTERPRISES
RANDY SAY - GEOLOGIST
ARVADA, COLORADO

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WELL DATA

OPERATOR:	AMOCO Production Company, Denver, CO.	
WELL NAME:	No.1-26 Dick's Brown.	
FIELD NAME / PROSPECT:	Wildcat.	
LOCATION:	850'fsl 2100'fel SW SE SEC.26-T15S-R43W, Cheyenne Co., CO.	
ELEVATION:	4096'- Ground; 4108'-KB.	
SPUD DATE:	4/8/96.	
COMPLETION DATE:	4/22/96.	
STATUS:	Plugged and abandoned 4/22/96.	
HOLE SIZE:	12.250"-605'-Surface; 7.825"-TD[5540'].	
CASING:	8.625"-594'-Surface casing; No production casing run.	
DRILL COLLARS / PIPE:	6.25" / 4.50".	
TOTAL DEPTH:	5540'(-1432') - Driller; 5539'(-1431') Electric Log.	
CONTRACTOR:	KUDU Drilling Co., Inc., RIG NO.1 Wichita, KS.	
GEOLOGIST:	Randy Say- RSay Enterprises.	
ENGINEER:	Ron Pulliam - AMOCO.	
MUD COMPANY:	Service Mud Company, Denver, CO.	
MUD TYPE:	NATIVE (SURFACE-3600'); DRIPAC-CHEM (3600' - TD [5540']).	
MUDLOGGING:	Gas detection [HOTWIRE AND CHROMATOGRAPH] monitored by wellsite geologist.	
DRILL STEM TEST:	DST NO.1 4390'-4420'(30') - Lansing Test Conventional DST NO.2 5130'-5244'(114') - Morrow Test Conventional	
CORES:	None.	
ELECTRIC LOGS: Engineer:	Halliburton Energy Services, Woodward,OK. PIROUTEK.	
	LOGS RUN	INTERVAL
	HRI-DFL	125'-5497'
	SDL-DSN	2780'-5497'
	ML	2780'-5537'
	BCS	594'-5497'
	QUICK LOOK	3800'-5490'

SUMMARY

The AMOCO Production Company, No.1-26 Dick's Brown [SW SE SEC.26-T15S-R423, Cheyenne Co., CO] was drilled as a wildcat well in the Las Animas Arch, Colorado. The primary objective was the Pennsylvanian Morrow Upper Sand, which the No.1-26 Dick's Brown developed as a 33 foot thick sand interval [5201'-5234']. The No.1-26 Dick's Brown Upper Sand was drill stem tested while drilling [DST No.2, 5130'-5244', See Pages 12-14], and recovered 120 feet of drilling mud and no hydrocarbons. No shows of oil were found in the samples, with only a rare trace of a very weak residual cut on some clusters. Electric logs showed the Upper Sand to have very tight porosity [less than 8-10%]. No other Morrow sands developed in the NO.1-26 Dick's Brown.

After electric logs, sample cuttings, and drill stem test data through the Upper Sand interval were evaluated, the AMOCO No.1-26 Dick's Brown the Upper Sand was interpreted to be a nonproductive interval.

The secondary objectives in the Pennsylvanian Shawnee/Topeka, Lansing Kansas City, Marmaton, and the Mississippian Spergen, developed eight shows. One zone was tested while drilling [DST NO.1 4390'-4420', Pages 9-11]. SHOW No.5 [4398'-4414'] in the Lansing Kansas City section was drill stem tested and recovered 2250 feet of slightly muddy water and no hydrocarbons. The zone had very high density porosity [26-29%], and had a trace of live oil in the samples. After electric logs, sample cuttings, and drill stem test data were evaluated, SHOW No.5 was interpreted to be nonproductive. No other zones warranted testing.

On April 22, 1996, the AMOCO No.1-26 Dick's Brown was plugged and abandoned.

BIT RECORD, DEVIATION SURVEYS, AND ELECTRIC LOG FORMATION TOPS

NO.	MAKE	TYPE	SIZE	DEPTH OUT	FOOTAGE	HOURS	FT/HR	DEV/DEPTH
1	STC	FDS	12.250	605	605	5.50	110.00	0.50°-605'
2	NEW TECH	NT2	7.875"	2872	2267	33.50	67.67	1.00°-2872'
3	NEW TECH	NT2	"	5044	2172	140.50	15.46	0.50°-5044'
4	HTC	AJ225	"	5540	496	53.00	9.36	1.00°-5540'

DEVIATION SURVEYS

DEVIATION	DEPTH	DEVIATION	DEPTH	DEVIATION	DEPTH
0.50°	605'	0.75°	5044'		
1.00°	2872'	1.00°	5244'		
0.50°	4420'	1.00°	5540'		

FORMATION /ZONE	DEPTH (FEET)	DATUM(KB-4108')
Dakota	1504	2604
Cheyenne Sand	1844	2264
Morrison	1904	2204
PERMIAN	1990	2118
Day Creek	2112	1996
Blaine	2370	1738
Cedar Hills	2710	1398
Stone Corral	2880	1228
Stone Corral-BASE	2910	1198
Neva	3472	636
Foraker	3644	464
Shawnee/Topeka	3972	136
Topeka "C"	4152	-44
Lansing Kansas City	4230	-122
Marmaton	4690	-582
Pawnee Member	4716	-608
Fort Scott Member	4766	-658
Cherokee	4826	-718
Atoka	4978	-870
Morrow Shale(SONIC)	5126	-1018
Morrow Shale(STRAT)	5146	-1038
202	5176	-1068
SS	5201	-1093
SS-BASE	5234	-1126
302U	5240	-1132
SS-Middle-Zone		
SS-Middle-Base-Zone		
Lower Morrow Lime)	5252	-1144
MISSISSIPPIAN	5322	-1214
Spergen	5406	-1298
TOTAL DEPTH(DRILLER)	5540	-1432
TOTAL DEPTH(ELECTRIC LOG)	5539	-1431

DAILY DRILLING CHRONOLOGY

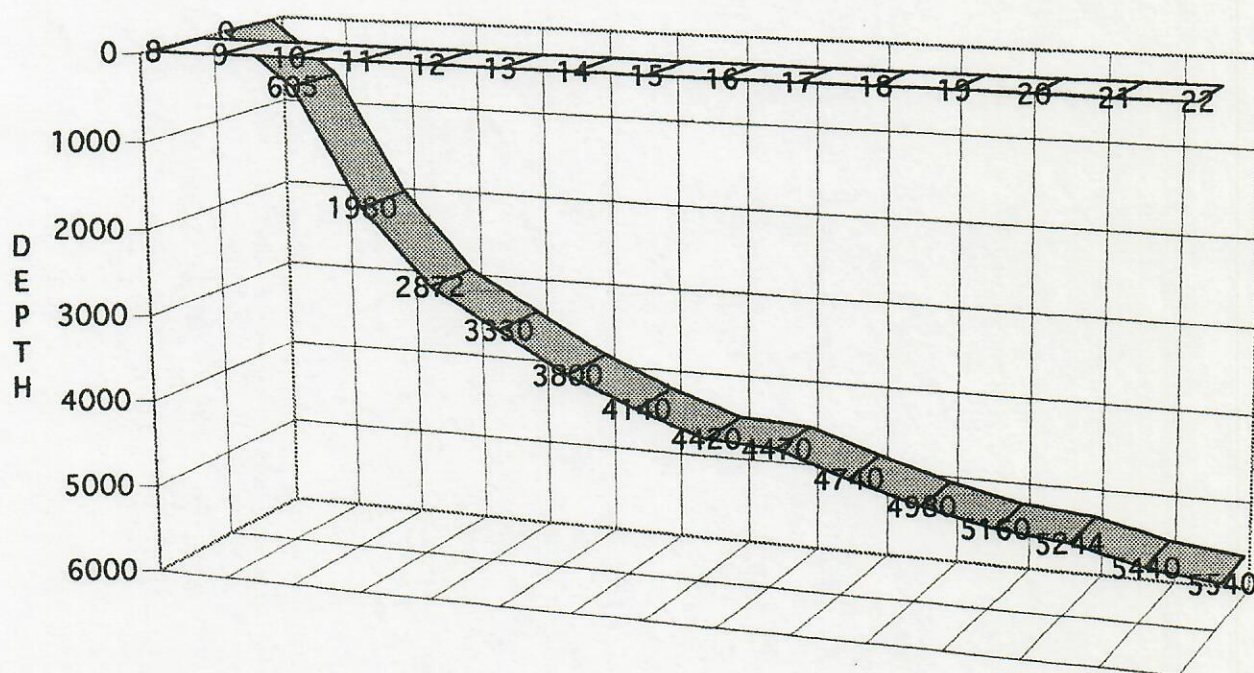
DATE	DEPTH	24HR FOOTAGE	DRILLING ACTIVITIES
4/8	0000	0000	Rig Up, Spud WELL W/NB1 [12.50"], Drlg SURF HOLE. TO 605', CIRC & COND HOLE, RUN SURF CSG [8.625"] TO 594' CMT SURF CSG, W.O.C.
9	605	605	TIH W/NB2 [7.825"], Drlg.
10	1980	1375	Drlg.
11	2872	892	Drlg, TOOH for NB3 at 2872', DS, TIH, Drlg.
12	3330	458	Drlg.
13	3800	470	Drlg.
14	4140	340	Drlg.
15	4420	280	Drlg CFS at 4420', TOOH for DST No.1 [4390'-4420'], TIH, Run DST No.1, TOOH and Lay Down DST tools, TIH w/rr NB3, Drlg.
16	4470	50	Drlg.
17	4740	270	Drlg.
18	4980	240	Drlg.
19	5160	180	Drlg, TOOH at 5044' for NB 4, TIH, Drlg.
20	5244	84	DRLG, CFS @ 5226', DRLG, CFS @ 5244', PREPARE TO RUN DST No.2, TOOH & PICK UP DST No.2 TOOLS, TIH & RUN DST No.2, TOOH & LAY DOWN DST No.2, TIH W/rr NB 4, DRLG.
21	5440	196	Drlg.
22	5540	100	DRLG, REACH TD [5540'] @ 3:30 P.M., CIRC & COND, TOOH FOR ELOGS, RUN ELOGS, W.O.O., PLUG & ABANDON HOLE

SUMMARY OF POROUS ZONES

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF: CORED INTERVALS AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES AND RECOVERIES.

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Dakota	1504'	1694'	Water Sand
Cheyenne Sand	1844'	1904'	Water Sand
Cedar Hills	2710'	2792'	Water Sands
Lansing Kansas City	4390'	4420'	See attached geologic report for DST No.1 analysis
Morrow	5130'	5244'	See attached geologic report for DST No.2 analysis.
Spergen Dolomite	5406'	5540'	

DAILY DRILLING CHRONOLOGY



APRIL 8 THRU 22 1996

965AMOCO	AMOCO Production Company					MULL Drilling Company						
965RSWSG	NO.1-26 Dick's Brown					No.1 Sherman						
	850'fsl 2100'fel					600'fsl 600'fel						
	SW SE SEC.26-T15S-R43W					SE SE SEC.26-T15S-R43W						
	Cheyenne Co., CO					Cheyenne Co., CO						
	Wildcat 4/22/96					Wildcat 1/19/93 P&A						
	AFE NO.					AFE NO.						
	API NO.05-017-070751000					API NO.05-017-07350						
TIME STRAT	ROCK STRATIGRAPHIC	PROG	SMPL	DATUM-KB	ELOG	DATUM-KB	THICK	ELEV	DIFF.	E-LOG	DATUM-KB	THICK
				4108		4108		NO.1	NO.2		4099	
	QUATERNARY EOLIAN SAND				SURF	----				SURF	----	
CRETACEOUS	NIORARA											
	FORT HAYS	1052			1026	3082				1028	3071	
	CARLILE				1136	2972				1139	2960	
	CODELL				1136	2972				1139	2960	
	DAKOTA	1524			1504	2604				1500	2599	
	KIOWA				1694	2414				1684	2415	
	CHEYENNE SAND	1850			1844	2264				1826	2273	
JURASSIC	MORRISON				1904	2204				1892	2207	
	MORRISON-LOWER				1990	2118				1986	2113	
PERMIAN	PERMIAN				1990	2118				1986	2113	
	DAY CREEK				2112	1996				2130	1969	
	WHITEHORSE				2130	1978				2143	1956	
	BLAINE SALT	2378			2370	1738				2354	1745	
	CEDAR HILLS	2729			2710	1398				2704	1395	
	HARPER PLAIN				2792	1316				2783	1316	
	STONE CORRAL	2896			2880	1228	30			2870	1229	34
	STONE CORRAL (BASE)				2910	1198				2904	1195	
	WELLINGTON				2910	1198				2904	1195	
	CHASE	3084			3066	1042				3060	1039	
	NEVA				3472	636				3460	639	
	RED EAGLE				3570	538				3557	542	
	JOHNSON				3592	516				3582	517	
	FORAKER				3644	464				3634	465	
	ROOT				3804	304				3797	302	
PENNSYLVANIAN	WAUBUNSEE/VIRGIL	3880			3866	242				3836	263	
	SHAWNEE/TOPEKA	4015			3972	136				3991	108	
	TOPEKA "C"				4152	-44				4148	-49	
	HEEBNER SHALE				4202	-94				4198	-99	
	TORONTO LIMESTONE				4214	-106				4206	-107	
	LANSING KANSAS CITY	4249			4230	-122				4225	-126	
	MARMATON	4695			4690	-582				4671	-572	
	-PAWNEE MEMBER-2NDARY				4716	-608				4700	-601	
	-FORT SCOTT MEMBER-2NDARY				4766	-658				4752	-653	
	CHEROKEE	4838			4826	-718				4814	-715	
	ATOKA	5002			4978	-870				4998	-899	
	MORROW SHALE (SONIC)				5126	-1018	126	-9		5108	-1009	146
	MORROW SHALE (STRAT)	5151			5146	-1038	106	-8		5127	-1028	127
	202				5176	-1068		12		5179	-1080	
	SS				5201	-1093	33	-13		5188	-1089	22
	SS-BASE				5234	-1126		-15		5210	-1111	
	302U				5240	-1132		-19		5212	-1113	
	SS-LOWER									5186	-1087	24
	SS-LOWER-BASE									5210	-1111	
	LOWER MORROW LIME	5240			5252	-1144	10			5254	-1155	
MISSISSIPPIAN	MISS	5332			5322	-1214				5308	-1209	
	SPERGEN	5478			5406	-1298				5452	-1353	
	TOTAL DEPTH (DRILLER)	5526			5540	-1432				5540	-1441	
	TOTAL DEPTH (STRAP)											
	TOTAL DEPTH (ELECTRIC LOG)				5539	-1431				5540	-1441	

MUD RECORD										
OPERATOR	Amoco Production Company				MUD TYPE		GEL-DRISPAC			
WELL NAME	No.1-26 Dick's Brown				BIT SIZE		7.875"			
PROSPECT	Wildcat				DP SIZE/TYPE		4.50"1/XH			
LOCATION	SW SE SEC.26-T15S-R43W				DC SIZE/TYPE		6.25"			
COUNTY/STATE	Cheyenne Co., CO				DC LENGTH		557'			
CONTRACTOR	KUDU Drilling Company				PUMP SIZE		6.0" X 14"			
RIG NO	1				SURF CSG		8.625"-594'			
DATE	8-Apr	9-Apr	10-Apr	11-Apr	12-Apr	12-Apr	13-Apr	14-Apr	14-Apr	15-Apr
DEPTH	SPUD	605	1960	2872	3300	3617	3770	4130	4230	4400
TIME		5A	6A	6A	5A	7P	5A	6A	2P	6A
WEIGHT			9.2	9.0	9.3	8.6	8.6	9.0	9.0	9.0
FUNNEL VISCOSITY			32	33	33	46	46	43	46	45
WATER LOSS							8.8	8.8	8.8	7.2
pH			7.0	7.0	7.0	11.0	10.5	9.5	10.0	10.5
CAKE THICKNESS							1	1	1	1
CHLORIDE [PPM]		100	200	68000	43000	3500	2500	3200	3500	3200
CALCIUM [PPM]		200	40	2560	2160	40	40	40	40	40
LCM [LB/BBL]			2	1	1	2	2	2	2	2
LOSS CIRC [BBL]										
MUD GRADIENT			.478	.488	.484	.447	.447	.447	.468	.468
PLASTIC VISCOSITY			3	4	5	12	13	10	12	13
YIELD POINT			7	11	11	18	18	15	16	18
GEL STRENGTH			3/9	4/13	4/15	10/21	11/23	9/21	11/21	10/24
ALKALINITY FILTRATE						1.4	1.2	.3	.3	.3
SAND CONTENT [%]						TR	TR	TR	TR	TR
SOLIDS [%]			6.4	3.8	4.5	2.0	2.0	4.8	4.8	4.8
OIL CONTENT [%]										
WATER CONTENT [%]			93.6	96.2	95.5	98.0	98.0	95.2	95.2	95.2
HTHP/cK						17.2/2	17.6/2	14.4/2	14.4/2	15.2/2
MUD VOLUME-HOLE		36	127	201	231	231	245	268	268	307
MUD VOLUME-PITS		605	605	605	605	605	605	605	605	605
MUD VOL-TOTAL CIRC		641	732	806	836	836	850	873	873	912
PUMP- BBL/STROKE		.137	.137	.137	.137	.137	.137	.137	.137	.137
PUMP- STROKE/MIN		68	68	68	68	68	68	68	68	68
PUMP- BBL/MIN		9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
PUMP- GPM		391	391	391	391	391	391	391	391	391
ANNULAR VEL [FT/MIN]										
" OPPOSITE DP		230	230	230	230	230	230	230	230	230
" OPPOSITE COLLAR		417	417	417	417	417	417	417	417	417
WOB		30	35	40	40	40	40	40	40	40
PP		1000	1200	1200	1200	1200	1200	1200	1200	1200
SPM		68	68	68	68	68	68	68	68	68
RPM		80	80	80	80	80	80	80	80	80
GPM		391	391	391	391	391	391	391	391	391
BTM UP [CALCULATED]		4	14	22	25	25	28	32	32	36
BTM UP [MUD LOG]										
SYSTEM TOTAL- MIN		69	79	87	90	90	93	9.5	95	98
DAILY MUD- WT		88	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
DAILY MUD-VIS		32	32	32	32	32	42	44	44	45
DAILY MUD-WL							16	16	16	15
DAILY COST		968	1001	753	1300	1300	1544	357	357	1488
CUMULATIVE COST		968	1969	2722	4022	4022	5566	5924	5924	7412

TRILOBITE TESTING L.L.C.

OPERATOR : AMOCO PROD CO
 WELL NAME: DICKS BROWN #1-26
 LOCATION : 26-15s-43w CHEYENNE CO
 INTERVAL : 4390.00 To 4420.00 ft

DATE 4-15-96
 KB 4106.00 ft
 GR 4094.00 ft
 TD 4420.00 ft

TICKET NO: 9165 DST #1
 FORMATION: LANSING
 TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 15 Rec.	2342		13339			PF Fr. 1722 to 1737 hr
SI 30 Range(Psi)	4995.0	0.0	4025.0	0.0	0.0	IS Fr. 1737 to 1807 hr
SF 60 Clock(hrs)	ALP		30410			SF Fr. 1807 to 1907 hr
FS 120 Depth(ft)	4395.0	0.0	4415.0	0.0	0.0	FS Fr. 1907 to 2107 hr

	Field	1	2	3	4
A. Init Hydro	2054.0	0.0	2153.0	0.0	0.0
B. First Flow	466.0	0.0	322.0	0.0	0.0
Bl. Final Flow	752.0	0.0	719.0	0.0	0.0
C. In Shut-in	1133.0	0.0	1150.0	0.0	0.0
D. Init Flow	781.0	0.0	869.0	0.0	0.0
E. Final Flow	1127.0	0.0	1140.0	0.0	0.0
F. Fl Shut-in	1137.0	0.0	1150.0	0.0	0.0
G. Final Hydro	2016.0	0.0	2143.0	0.0	0.0
Inside/Outside	1		0		

T STARTED 1525 hr
 T ON BOTM 1718 hr
 T OPEN 1722 hr
 T PULLED 2107 hr
 T OUT 2400 hr

TOOL DATA-----
 Tool Wt. 1800.00 lbs
 Wt Set On Packer 25000.00 lbs
 Wt Pulled Loose 140000.00 lbs
 Initial Str Wt 90000.00 lbs
 Unseated Str Wt 120000.00 lbs
 Bot Choke 0.75 in
 Hole Size 8.88 in
 D Col. ID 2.25 in
 D. Pipe ID 3.80 in
 D.C. Length 557.00 ft
 D.P. Length 3826.00 ft

RECOVERY
 Tot Fluid 2550.00 ft of 557.00 ft in DC and 1993.00 ft in DP
 330.00 ft of MW 70%WATER 30%MUD
 2220.00 ft of SW 100%WATER
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 SALINITY 20000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type	CHEMICAL
Weight	9.00 lb/cf
Vis.	45.00 S/L
W.L.	7.20 in3
F.C.	0.00 in

Mud Drop N
 Amt. of fill 0.00 ft
 Btm. H. Temp. 134.00 F
 Hole Condition GOOD
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out N
 Tool Chased N
 Tester SAM CORMACK
 Co. Rep. ROD STEINBRINK
 Contr. KUDU DRLG
 Rig # 1
 Unit #
 Pump T.

BLOW DESCRIPTION

IF; STRONG BLOW OFF BTM IN 1 MIN
 ISI; BLED OFF BLOW-NO RETURN
 FF; STRONG BLOW OFF BTM IN 3 MINS.
 DECREASED TO 8" AT FINAL
 FSI; BLED OFF BLOW-NO RETURN

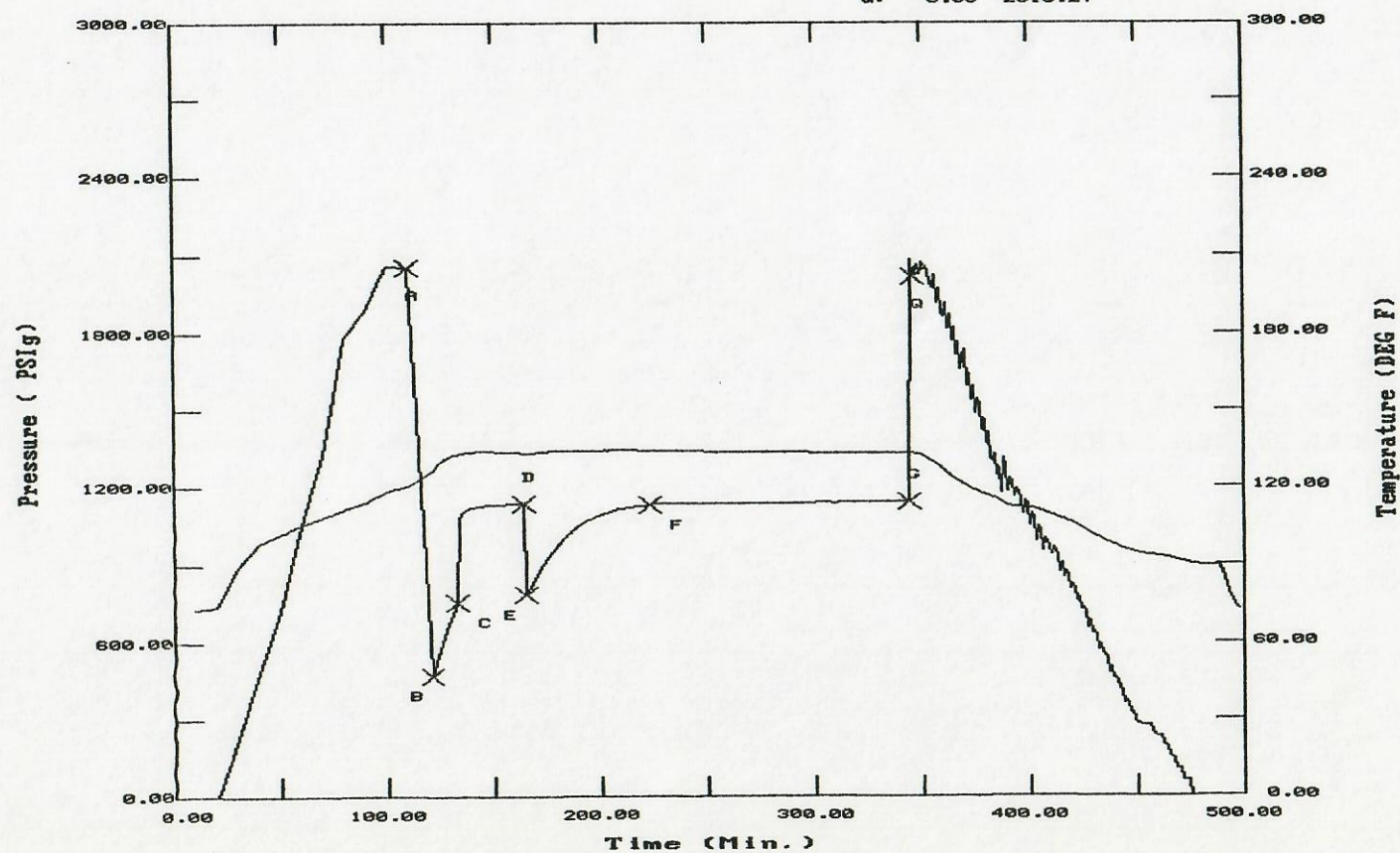
SAMPLES:
 SENT TO:

Test Successful: Y

TEST HISTORY

9165 DST #1 DICKS BROWN #1-26 AMOCO

Flag Points		
t (Min.)	P (PSig)	
A	0.00	2054.21
B	0.00	466.88
C	12.00	752.66
D	31.00	1133.80
E	0.00	781.81
F	58.00	1127.65
G	121.00	1137.10
Q	0.00	2016.27



TRILOBITE TESTING L.L.C.

OPERATOR : AMOCO PROD CO
 WELL NAME: DICKS BROWN #1-26
 LOCATION : 26-15S-43W CHEYENNE CO.
 INTERVAL : 5130.00 To 5244.00 ft

DATE 4-20-96
 KB 4106.00 ft
 GR 4094.00 ft
 TD 52440.00 ft

TICKET NO: 9167 DST #2
 FORMATION: MORROW
 TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 15 Rec.	2342		13339			PF Fr. 0020 to 0035 hr
SI 30 Range(Psi)	4995.0	0.0	4025.0	0.0	0.0	IS Fr. 0035 to 0105 hr
SF 60 Clock(hrs)	ALP		23832			SF Fr. 0105 to 0205 hr
FS 120 Depth(ft)	5135.0	0.0	5239.0	0.0	0.0	FS Fr. 0205 to 0405 hr

	Field	1	2	3	4	
A. Init Hydro	2498.0	0.0	2523.0	0.0	0.0	T STARTED 2100 hr
B. First Flow	72.0	0.0	72.0	0.0	0.0	T ON BOTM 0008 hr
Bl. Final Flow	90.0	0.0	72.0	0.0	0.0	T OPEN 0020 hr
C. In Shut-in	951.0	0.0	919.0	0.0	0.0	T PULLED 0405 hr
D. Init Flow	97.0	0.0	114.0	0.0	0.0	T OUT 0615 hr
E. Final Flow	142.0	0.0	135.0	0.0	0.0	
F. Fl Shut-in	958.0	0.0	939.0	0.0	0.0	
G. Final Hydro	2402.0	0.0	2494.0	0.0	0.0	
Inside/Outside	I		0			

RECOVERY
 Tot Fluid 120.00 ft of 120.00 ft in DC and 0.00 ft in DP
 120.00 ft of DRLG. MUD
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of
 SALINITY 3200.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

IF; WEAK 1/4" BLOW STEADY THROUGHOUT
 ISI; NO BLOW
 FF; WEAK SURFACE RETURN IN 10 MINS
 DIED IN 30 MINS
 FSI; NO BLOW

SAMPLES:
 SENT TO:

TOOL DATA-----
 Tool Wt. 2000.00 lbs
 Wt Set On Packer 25000.00 lbs
 Wt Pulled Loose 140000.00 lbs
 Initial Str Wt 100000.00 lbs
 Unseated Str Wt 100000.00 lbs
 Bot Choke 0.75 in
 Hole Size 8.88 in
 D Col. ID 2.25 in
 D. Pipe ID 3.80 in
 D.C. Length 557.00 ft
 D.P. Length 4565.00 ft

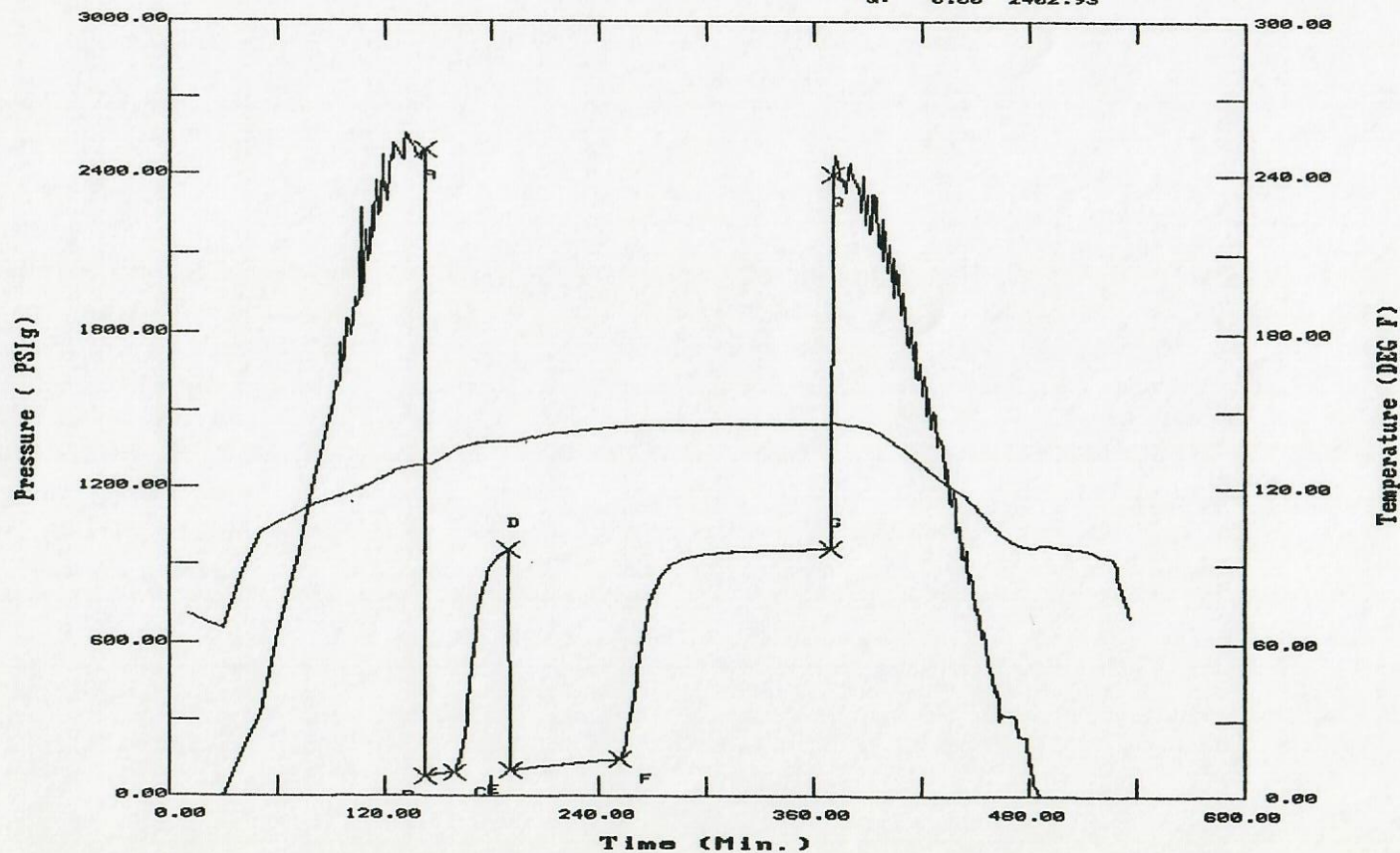
MUD DATA-----
 Mud Type CHEMICAL
 Weight 9.00 lb/cf
 Vis. 51.00 S/L
 W.L. 7.20 in3
 F.C. 0.00 in
 Mud Drop N
 Amt. of fill 0.00 ft
 Btm. H. Temp. 145.00 F
 Hole Condition GOOD
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out N
 Tool Chased N
 Tester ROD STEINBRINK
 Co. Rep. RON PULLIAM
 Contr. KUDU DRLG
 Rig # 1
 Unit #
 Pump T.

Test Successful: Y

TEST HISTORY

9167 DST #2 DICKS BROWN #1-26 AMOCO PROD CO.

	t<Min.>	Flag Points P< PSig>
A:	0.00	2498.19
B:	0.00	72.17
C:	16.00	90.13
D:	31.00	951.73
E:	0.00	97.94
F:	61.00	142.92
G:	110.00	950.61
Q:	0.00	2402.93



*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: DICKS BROWN #1-26	P.O. SUB 1' ABOVE 90' DC	5010
LOCATION : 26-15S-43W CHEYENNE CO.	C.O. SUB 1'	5100
TICKET No. 9167 D.S.T. No. 2 DATE 4-20-96	S.I. TOOL 5'	5106
TOTAL TOOL TO BOTTOM OF TOP PACKERS 31	SAMPLER 3'	5109
INTERVAL TOOL 21	HMV 5'	5114
BOTTOM PACKERS AND ANCHOR	JARS 5'	5119
TOTAL TOOL 51		
DRILL COLLAR ANCHOR IN INTERVAL		
D.C. ANCHOR STND.Stands Single Total	SAFETY JOINT 2'	5121
D.P. ANCHOR STND.Stands 1 Single Total 93	PACKER 4'	5125
TOTAL ASSEMBLY 145	PACKER 5'	5130
D.C. ABOVE TOOLS.Stands 6 Single Total 557	DEPTH	
D.P. ABOVE TOOLS.Stands 49 Single Total 4565	STUBB 1'	5131
TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5267	ANCHOR	
	3'	5134
TOTAL DEPTH 5244	ALP REC. @	5135
TOTAL DRILL PIPE ABOVE K.B. 23	1' CO SUB	5135
REMARKS:	93' DP	5228
SAMPLER DATA;	1' CO SUB	5229
GAS;	5'	5234
OIL;		5239
MUD; 4000 ML		
WATER;	T.C.	
TOTAL; 4000 ML	DEPTH	
PRESSURE; 30 # PSI		
RW 1.9 @ 70 DEG. = 3200		
	BULLNOSE 5' W/AK-1 REC. @	5239
	T.D.	5244

OVERVIEW

The AMOCO Exploration Company No.1-26 Dick's Brown [SW SE SEC.26-T15S-R43W, Cheyenne Co., CO] was drilled as a wildcat well in the Las Animas Arch, Colorado. The primary objectives were the Pennsylvanian Morrow Sands, commonly referred to as Upper, Middle, and Lower Sands. The secondary objectives were the Pennsylvanian Topeka, Marmaton and Lansing Kansas City, and the Mississippian and Spergen formations. The offset/control well was the MULL Drilling Company No.1 Sherman [SE SE SEC.26-T15S-R43W], which developed a 22 foot thick UPPER Morrow Sand [5188'-5210']. The AMOCO No.1-26 Dick's Brown developed an 33 foot Upper Sand at 5201'-5234'(-1093'), and was drill stem tested [DST NO.2 5130'-5244', See Pages 12-14]. DST NO.2 recovered 120 feet of drilling mud and no hydrocarbons after samples were circulated and evaluated at 5244'. No shows of oil were found in the samples, with only a rare trace of very weak residual cut and no fluorescence. The NO.1-26 Dick's Brown UPPER Sand had an Upper Zone [5201'-5226'-25' Thick], which was very fine to fine grained, and a Lower Zone [5226'-5234'-8' Thick], which was a coarse grained basal sequence. Neither interval had good porosity or oil shows, as the electric logs and DST NO.2 showed. For a more detailed samples description see the UPPER MORROW SAND description listed below.

The Lower Morrow Limestone came in at 5252'(-1144') and no Lower Morrow Sand interval developed. No other drill stem tests were run in the Morrow section and the Morrow Shale section was deemed nonproductive.

STRUCTURE

Structurally, the AMOCO No.1-26 Dick's Brown [SW SE SEC.26-T15S-R43W] was 8 foot low to the reference offset/control well, the MULL Drilling Company [SE SE SEC.26-15S-R43W] at the top of the Morrow Shale(STRAT) [5146'(-1038') versus 5127'(-1028')].

SECONDARY OBJECTIVES

The other secondary objectives, the Pennsylvanian Topeka, Lansing Kansas City, Marmaton, Atoka, and the Mississippian Spergen developed eight zones with sample shows. One zone was tested while drilling with DST No.1 [4390'-4420', See Pages 9-11], in the Lansing Kansas City section. SHOW NO.5 [4398'-4414'] yielded 2550 feet of muddy salt water and no hydrocarbons. Electric logs showed the zone to be nonproductive. See SHOWS NO.1-8 listed below.

STATUS

The AMOCO Production Company No.1-26 Dick's Brown was plugged and abandoned on April 22, 1996 after samples, electric log, and drill stem test data were evaluated.

FORMATION AND SHOW ZONE LISTING

The ensuing Show Evaluation listings are in the order they were drilled. They are categorized either by formation name and or by common zone designation.

FORMATION AND ZONE LISTING

The wellsite geologist began sample descriptions at 3600 feet. The interval 3600' to the top of the SHAWNEE/TOPEKA at 3972'(+136'), included the PERMIAN formations the Red Eagle, Johnson, Foraker, Root, and the Waubunsee at the top of the Pennsylvanian. No sample shows were found in the cuttings from 3600' to 3972', with a few zones of porosity developing. No drill stem tests were run over this interval after samples and electric log were evaluated.

SHAWNEE/TOPEKA 3972'(+136'). PENNSYLVANIAN

The Shawnee/Topeka interval was 258 feet thick with interbedded limestones and shales and an increase in dolomites through the porosity zones. Typically, the Shawnee/Topeka has three porosity zones which can develop shows. These three zones are the Topeka "A", "B", and "C", or upper, middle, and lower [TOPEKA "C"] porosity zones. Background gas was 4-6 units through the entire interval. The drilling rate background was 5.0 min/ft with the drilling breaks at 1.0-2.0 min/ft. Three shows developed in the Shawnee/Topeka section, in the upper "A" Shawnee/Topeka at SHOW NO.1 [4022'-4042'[20'-Thick], the Middle "B" Shawnee at SHOW No.2 [4074'-4090'[16'-Thick], and in the Topeka "C" zone at SHOW No.3 [4180'-4202'[22'-Thick]. None of the zones were drill stem tested either while drilling or after electric logs were evaluated.

SHOW NO.1 4022'-4042'(20')(+86'). 2.0'/ft vs 4.0'/ft.

TG=5 U; C1=4 U; C2=None.

LITHOLOGY: LS mot ltgy-wh-ltbrn gran-litho vvfri incr suc & dolo slcarb pyr.

POROSITY: FR-occ P(gran).

OIL STAIN: None.

FLOR: 10% mot ltyel.

CUT: 10% slow mlky crush cut.

RESIDUE: None.

SHOW NO.2 4074'-4090'(16')(+34'). 2.0'/ft vs 4.5'/ft.

TG=6 U; C1=5 U; C2=None.

LITHOLOGY: LS mot bf-tan & occ dkgy firm mfri slfos & occ ool w/intbd dolo strgs slpyr.

POROSITY: P-FR(gran-xfxl).

OIL STAIN: None.

FLOR: 10% mot pale yel.

CUT: 10% slow myel diffuse cut.

RESIDUE: None.

TOPEKA "C" 4152'(-44').

SHOW NO.3 4180'-4202'(22')(-72'). 1.5'/ft vs 5.0'/ft.

TG=6 U; C1=5 U; C2=TR.

LITHOLOGY: LS lttan-crm & gy litho-gran fri-firm occ gran & dolo shly slfos w/chk mtrx slty pyr.

POROSITY: FR-occ G(intergran).

OIL STAIN: None.

FLOR: 10% mot ltyel.

CUT: 10% immed slow ltyel.

RESIDUE: None.

FORMATION AND ZONE LISTING

LANSING KANSAS CITY 4230'(-122').

PENNSYLVANIAN

The Lansing Kansas City section was 460 feet thick and contained three show zones [SHOWS NO.4-6]. The Lansing is an interval of interbedded limestones and shales with occasional dolomitic stringers. Lansing porosity zones are usually fossiliferous and oomoldic. Background gas through the Lansing averaged 6-8 units, with drilling rates at 5.0'/ft and drilling breaks at 1.0 to 3.5'/ft. SHOW NO.4 was a poor show with poor to fair oomoldic porosity and a trace of oil stain, with a trace of fluorescence and cut. SHOW NO.5 had very good to excellent porosity with a rare trace of live oil. The Zone was drill stem tested while drilling [DST NO.1 4390'-4420', See Pages 9-11] and recovered 2550 feet of muddy water and no hydrocarbons. SHOW NO.5 was deemed nonproductive after electric logs, samples shows, and DST No.1 results were evaluated. SHOW NO.6 had poor oomoldic porosity, no oil stain, and only a trace of fluorescence and cut, and was not tested.

SHOW NO.4 4264'-4278'(14')(-156'). 1.5'/ft vs 5.5'/ft.

TG=6 U; C1=4 U; C2=None.

LITHOLOGY: LS tan-brn occ mot mgy xfxl-gran vfri-firm vfos w/calc infill & chk mtrx slsly pyr occ sldolo.

POROSITY: FR(gran).

OIL STAIN: None.

FLOR: TR pale yel.

CUT: TR weak mlky crush cut.

RESIDUE: None.

SHOW NO.5 4398-4414'(16')(-290'). 0.5'/ft vs 6.5'/ft.

TG=8 U; C1=6 U; C2=2 U.

LITHOLOGY: LS mot ltan-bf-wh vvfri vvfos w/abnt ool text w/calc infill & occ chky mtrx vslpyr(vf dissem pyr) occ carb, LS gran-xfxl.

POROSITY: G-EX(intergran-oocastic w/oomold).

OIL STAIN: 10% sat stn w/tr live oil at top of zone.

FLOR: 60% m-ltyel w/occ briyel(oil).

CUT: 60% slow myel diffuse cut w/occ immed strm briyel(oil).

RESIDUE: Myel flor res w/occ tan sat stn

SHOW NO.6 4520'-4530'(10')(-412'). 1.5'/ft vs 5.5'/ft.

TG=10 U; C1=8 U; C2=TR.

LITHOLOGY: LS wh-vltgy-crm litho-gran fri sldolo mfos w/chk mtrx slty slcarb.

POROSITY: FR(oomold).

OIL STAIN: None.

FLOR: TR mot myel.

CUT: TR slow weak mlky crush cut.

RESIDUE: None.

MARMATON FORMATION 4690'(-582')

PENNSYLVANIAN

The Marmaton Formation was 136 feet thick and contains two members, the middle Pawnee Member [4716'(-608')] and the lower Fort Scott Member [4766'(-658')]. Sometimes an upper Marmaton porosity zone develops with shows. The Marmaton is generally composed of interbedded limestone and thin shales, with an increase in dolomite over the lower section. Background gas through the Marmaton averaged 8-10 units. In the No.1-26 Dick's Brown, one show developed in the Fort Scott Member [SHOW No.7 4762'-4772'], but did not warrant testing after electric logs were evaluated.

FORMATION AND ZONE LISTING

MARMATON 4690'(-582').

FORT SCOTT MEMBER 4766'(-658').

SHOW NO.6 4762'-4772'(10')(-654'). 3.5'/ft vs 5.5'/ft.

TG=10 U; C1=8 U; C2=2 U.

LITHOLOGY: L mot tan-dkgy-occ brn xfxl-gran firm-fri dolo & gran slfos chky arg mtrx.

POROSITY: P(gran).

OIL STAIN: None.

FLOR: 10% mot ltyel.

CUT: 10% weak ltyel diffuse cut.

RESIDUE: None.

CHEROKEE 4826'(-718'). PENNSYLVANIAN

The Cherokee Formation was 152 feet thick and contained the usual interbedded black to dark gray-brown, highly organic shales, limestones, and an increase in the amount of limey dolomite, with traces of pyrite and chert. No shows were found in the Cherokee Formation. The usual pattern of gas increases through the Cherokee organic shales developed with background gases ranging from 10 units to a maximum of 24 units.

ATOKA 4978'(-870'). PENNSYLVANIAN

The Atoka Formation was 148 feet thick and was comprised of interbedded black shales with dark limestones and dolomite stringers. An increase in pyrite and chert was noted over the Cherokee interval. The Atoka Formation had high gas readings ranging from 14 to 24 units and was composed primarily of methane. The No.1-26 Dick's Brown Atoka section also developed one show zone in the Atoka section, in dolomitic limestone intervals. SHOW NO.8 and had a trace of tan saturated oil stain, but porosity was poor and granular. Show No.8 did not warrant testing while drilling or after electric logs were evaluated.

SHOW NO.8 5058'-5072'(14')(-950'). 3.5'/ft vs 6.5'/ft.

TG=24 U; C1=22 U; C2=4 U; C3=None.

LITHOLOGY: LS mot ltgy-tan-brn xfxl-gran fri-mfirm dolo vshly/carb pyr dolo & suc.

POROSITY: P-TT(gran).

OIL STAIN: Rare TR sat oil stn(gran dolo).

FLOR: 10% mot pale yel.

CUT: 10% very weak mlky crush cut.

RESIDUE: None.

MORROW SHALE(SONIC) 5126'(-1018') LOWER PENNSYLVANIAN

MORROW SHALE(STRAT) 5146'(-1038').

The Morrow Formation was 126 feet thick in the NO.1-26 Dick's Brown, and was the primary objective. The Morrow Formation consisted of black to gray marine shales and lighter colored shales in the valley fill sequences. The sandstone that does develop in the Morrow is found within these valley fill sequences. The primary objective was the Upper Sand, with the possible potential of the Middle and Lower Sand. The No.1-26 Dick's Brown developed an 33 foot Upper Sand [5201'-5234'(-1093')], which was drill stem tested [DST No.2 5130'-5244]. DST No.1 recovered 120 feet of drilling mud, with no oil or gas.

FORMATION AND ZONE LISTING

MORROW SHALE(STRAT) 5146'(-1038'). LOWER PENNSYLVANIAN

The Upper Sand had two intervals, an upper fine grained zone [5201'-5226'], and a basal coarse grained zone [5226'-5234']. DST NO.2 was run over the interval [DST NO.2 5130'-5244', See Page 12-14], and recovered 120 feet of drilling mud and no hydrocarbons. The UPPER Sand was tight and had siliceous cement and abundant matrix clay. No oil stain was found in the samples and only a rare trace milky diffuse cut was found in some clusters. No hydrocarbons were recovered from DST NO.2. See the MORROW UPPER SAND below for a detailed sample description.

MORROW UPPER SAND 5201'-5234'(33')(-1093'). 2.5' to 1.5'/ft vs 5.0'/ft.

TG=12 U; C1=10 U; C2=2 U.

UPPER INTERVAL 5201'-5226'(25').

LITHOLOGY: SS wh-ltgy vf-fg w/occ mg(base); firm-mhd dns-occ fri; sbrd; msrt; silcmt w/occ tr calc cmt; MTRX(very dirty, kao cly, carb & occ shly & arg, tr glau & pyr occ slty w/intbd sltst & sh strgs..

POROSITY: P-TT(decr w/cmt).

OIL STAIN: None.

FLOR: None.

CUT: Rare trace mlky diffuse cut on clus, non on uncon grs.

RESIDUE: None.

BASAL INTERVAL 5226'-5234'(8').

LITHOLOGY: SS clr-wh-gy; cg-mg; 50%-uncon/50%-clus; fri-firm-occ hd; sbang-sbrd; msrt sil & calc cmt; occ qtz ovrghs; kao cly infill; tr pyr occ rare tr glau; SS strgs intbedded with SH mot mgy-gygn sft slty slcarb.

POROSITY: P TT(decr w/cmt & qtz ovrghs).

OIL STAIN: None.

FLOR: None.

CUT: Very rare trace weak diffuse mlky cut on some clus.

RESIDUE: None.

LOWER MORROW LIME 5252'(-1144') LOWER PENNSYLVANIAN

The Lower Morrow was 70 feet thick and contained no shows. Background gas ranged from 8 to 12 units. The lithology of the Lower Morrow consisted mainly of chalky and moderately fossiliferous, and sometimes slightly sandy limestone, with a decrease in the amount of shale from the Morrow section. No sample shows were found in the No.1-26 Dick's Brown.

MISSISSIPPIAN 5322'(-1214'). UPPER MISSISSIPPIAN

The MISSISSIPPIAN was a tan to gray chalky fossiliferous and sandy limestone with thin interbedded shales. Background ranged from 10 to 12 units. No shows were found in the 84 feet penetrated in this section.

SHOW EVALUATION

FORMATION AND ZONE LISTING

SPERGEN 5406'(-1298').

MISSISSIPPIAN

The Spergen Formation consisted of interbedded limestone and granular dolomites with thin shale stringers. The top of the Spergen was marked by the typical increase in chert and in percentage of dolomite. No shows were found in the 134 feet of Spergen penetrated in the No.1-26 Dick's Brown, which reached a total depth of 5540'(-1432') in the Spergen dolomites.
