

U 128
21-105-24E
UINTAH COUNTY, U

X-12 CORE LOG

WHITE RIVER SHALE PROJECT

HOLE: X-12

From	To	Rock Description
0	10	NO SAMPLE
10	20	NO SAMPLE
20	30	SANDSTONE, LIGHT GRAY, FINE GRAINED, CALCAREOUS
30	40	SANDSTONE, LIGHT GRAY, FINE GRAINED, CALCAREOUS
40	50	NO SAMPLE
50	60	SANDSTONE, LIGHT GRAY, FINE GRAINED, CALCAREOUS
60	70	SANDSTONE, LIGHT GRAY TO BROWN, FINE GRAINED, CALCAREOUS
70	80	SANDSTONE, LIGHT GRAY TO BROWN, FINE GRAINED, CALCAREOUS
80	90	SANDSTONE, LIGHT GRAY TO BROWN, FINE GRAINED, CALCAREOUS
90	100	SANDSTONE, LIGHT GRAY TO BROWN, FINE GRAINED, CALCAREOUS
100	110	NO SAMPLE
110	120	SANDSTONE, LIGHT GRAY, FINE GRAINED, CALCAREOUS
120	130	SANDSTONE, LIGHT GRAY, FINE GRAINED, CALCAREOUS
130	140	NO SAMPLE
140	150	NO SAMPLE
150	160	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
160	170	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
170	180	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
180	190	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
190	200	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
200	210	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
210	220	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
220	230	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
230	240	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
240	250	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
250	260	SANDSTONE, LIGHT GRAY, MEDIUM GRAINED, CALCAREOUS
260	270	NO SAMPLE
270	280	NO SAMPLE
280	290	SANDSTONE, LIGHT GRAY AND SHALE (CL) LOW GRADE, LIGHT BROWN
290	300	OIL SHALE, LOW GRADE, LIGHT BROWN, FISSILE
300	310	OIL SHALE, LOW GRADE, LIGHT BROWN, FISSILE
310	320	OIL SHALE, LOW GRADE, LIGHT BROWN, FISSILE
320	330	OIL SHALE, LOW GRADE, LIGHT BROWN, FISSILE
330	340	OIL SHALE, LOW GRADE, LIGHT BROWN, FISSILE
340	350	OIL SHALE, LOW TO MEDIUM GRADE, LIGHT BROWN TO BROWN, FISSILE
350	360	OIL SHALE, LOW TO MEDIUM GRADE, LIGHT BROWN TO BROWN
360	370	OIL SHALE, LOW TO MEDIUM GRADE, LIGHT BROWN TO BROWN
370	380	OIL SHALE, LOW TO MEDIUM GRADE, LIGHT BROWN TO BROWN
380	390	OIL SHALE, LOW TO MEDIUM GRADE, LIGHT BROWN TO BROWN
390	400	OIL SHALE, LOW TO MEDIUM GRADE, LIGHT BROWN TO BROWN
400	410	OIL SHALE, LOW TO MEDIUM GRADE, LIGHT BROWN TO BROWN
410	420	OIL SHALE, LOW TO MEDIUM GRADE, LIGHT BROWN TO BROWN
420	430	OIL SHALE, MEDIUM GRADE, BROWN TO DARK BROWN
430	440	OIL SHALE, MEDIUM GRADE, BROWN TO DARK BROWN
440	450	OIL SHALE, MEDIUM GRADE, BROWN TO DARK BROWN
450	460	OIL SHALE, MEDIUM GRADE, BROWN TO DARK BROWN
460	470	OIL SHALE, MEDIUM GRADE, BROWN TO DARK BROWN
470	480	OIL SHALE, MEDIUM GRADE, BROWN TO DARK BROWN
480	490	OIL SHALE, MEDIUM GRADE, BROWN TO DARK BROWN
490	500	OIL SHALE, MEDIUM GRADE, BROWN TO DARK BROWN

HOLE: X-12

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[illegible]

20-21

DEPTH	±MM	FRX	PP	ASSAY	GRV	REC	LITH.	DESCRIPTION
				10 20 30 40	TEN	ARD		
832	+89							832.00 - 941.55 OIL SHALE
833								PREDOMINANTLY MEDIUM GRADE
834		VER						WITH SOME SMALL ZONES OF
835		FRX						INTER. BEDDED HIGH AND LOW GRADE
836								BROWN TO DARK BROWN, FAIRLY
837								COMPONENT ROCK CALAREO
838								HAS LONG VERTICAL FRX NO.
839								PERMEABILITY (ROCK) (FRX COULD
840								HAVE) LITTLE POROSITY
941	+80		55					941.55 - 942.5 OIL SHALE MEDIUM
942								LOW GRADE WITH SOME SMALL
943								SECTIONS OF MEDIUM AND HIGH
944			25					GRADE LIGHT TO MEDIUM BROWN
945								CALAREOUS COMPONENT ROCK
946								NO PERMEABILITY AND LITTLE POROSITY
947								946.5 - 951.19 UPPER WAVY BED
948								CONTACTED SANDSTONE LAYER
949								CALAREOUS OIL SATURATED
950								AND BUBBLING GAS
951	+70	VER	73					951.19 - 961.73 OIL SHALE LOW
952		FRX						TO MEDIUM GRADE, LIGHT TO
953								MEDIUM BROWN, HARD
954			22					CALAREOUS COMPONENT
955								ROCK NO PERMEABILITY AND
956								LITTLE POROSITY
957								
958								
959								
960			57					
961	+60		10.73					961.73 - 965.58 OIL SHALE LOW GRADE
962								LIGHT BROWN TO BROWN, HARD,
963								CALAREOUS COMPONENT ROCK
964								
965								965.58 - 80 LAST CORE GROUND UP
966			26					965.80 - 975.32 OIL SHALE LOW
967			68					GRADE (SOME IS VERY LOW GRADE)
968								PALE BROWN TO DARK BROWN, HARD
969								CALAREOUS COMPONENT
970			83					ROCK NO PERMEABILITY AND
971	+50		20.92					LITTLE POROSITY
972								
973								
974								
975			32					975.32 - 995.41 OIL SHALE LOW
976								GRADE LIGHT TO PALE BROWN
977								CALAREOUS, HARD, COMPACT
978			85					ROCK NO PERMEABILITY AND
979								LITTLE POROSITY
980			138.42					
981	+40		02					

DEPTH	±MM	FRX	PP	ASSAY 10 20 30 40	CAL TON	REC LRD	LITH.	DESCRIPTION
882					3.0			575.32-885.41 OIL SHALE LOW GRADE
883			30		16.3			LIGHT TO PALE BROWN CALCAREOUS
884			PA		14.6			HARD COMPACT ROCK NO
885			41		27.2			PERMEABILITY AND LITTLE POROSITY
886					19.7			885.41-895.56 OIL SHALE LOW
887					8.5			GRADE (VERY) GETTING INTO
888			37		6.0			A-GROOVE PALE BROWN TO
889			51 PA		5.6			CREAM SOME ROCK IS MARLSTONE
890			A0.44		3.9			WEAK ROCK - JUGS AS BELOW
891	+30		2.33		3.2			891.94 VUG FILLED WITH NAHCOLITE AND CALCITE
892			27.52		8.3			892.52 VUG FILLED WITH NAHCOLITE AND CALCITE
893			60.97		4.1			
894			78.96		4.3			894.50 VUG FILLED WITH NAHCOLITE AND CALCITE
895			32.4056		2.5			895.56-909.95 OIL SHALE LOW
896			73		1.8			GRADE WITH SOME SMALL
897			11.575		2.4			LAYERS OF MEDIUM GRADE
898			17.70		4.5			LIGHT TO MEDIUM BROWN
899			22.47		15.0			BROKEN UP SECTION AS PART
900					27.9			OF IT WAS LOST OUT OF THE
901	+20				4.1			CORE BARREL AND RECOVERED
902					40.5			ON THE NEXT RUN
903					14.9			
904					12.4			
905					21.3			905.42-907.25 SANDSTONE LAYER SAME OIL
906					25.4			906.46-907.16, 907.23-33 AND 907.64-72
907			14		30.7			SANDSTONE LAYER'S BUBBLING GAS
908					22.4			
909			95		34.5			909.45-920.21 OIL SHALE MEDIUM
910					45.9			TO HIGH GRADE, LOW GRADE
911	+10				40.3			TOWARDS BOTTOM OF RUN
912					26.9			DOWN TO DARK BROWN, SOFT
913					20.4			CALCAREOUS COMPACT
914					15.7			NO PERMEABILITY AND LITTLE PORE
915			80		10.4			LOW GRADE SHALE IS LIGHT
916					20.2			BROWN HARD CALCAREOUS
917					16.2			COMPACT WITH NO
918			42.97		10.8			PERMEABILITY AND LITTLE
919					12.2			POROSITY
920			71		10.1			
921	0		3.73		10.1			921.3-921.73 MANGANESE MARKER
922					3.8			SANDSTONE LAYER FILLS SATURATED
923					11.8			920.21-926.07 OIL SHALE LOW
924			13.96		11.5			GRADE LIGHT BROWN, HARD,
925			25.45		19.3			CALCAREOUS COMPACT ROCK
926			11.34		25.8			926.00-932.00 OIL SHALE MEDIUM
927			21		23.9			TO HIGH GRADE BROWN TO DARK
928			51		17.3			BROWN, SOFT, SLIGHTLY CALCAREOUS
929			55		33.7			COMPACT ROCK NO
930					11.1			PERMEABILITY AND LITTLE
931	-10				31.1			PORE VOLUME

DEPTH	±MM	FRX	PP	ASSAY				GAL/TON	REC	LITH	DESCRIPTION
				10	20	30	40				
932								49.9	9		932.08-937.78 OIL SHALE PREDOMINANT
933			2					57.7	5		HIGH GRADE, BROWN TO BLACK,
934								65.6	2		SLIGHTLY CALCAREOUS
935								57.5	7		SOME THIN LENSES OF BLACK,
936								79.7	3		SLIME 'DOTTED' SHALE' HEREIN
937								66.0	2		HIGH GRADE - SOME WHITE
938								42.2	3		STREAKS, WERE SEEN IN THIS
939			74					4.2	42.78		RUN.
940			75					49.7	5		939.78-944.82 OIL SHALE
941	-20		10					22.1	3		TO MEDIUM GRADE, HIGH GRADE
942								27.5	3		WITH INTERBEDDED MEDIUM
943			26					56.0	2		MEDIUM GRADE MATERIAL IN
944								19.0	3		BROWN TO DARK BROWN SOME
945			35.4					19.8	3		BLACK, SLIGHTLY CALCAREOUS
946			104.46					49.3	5		(SLIGHT) SOME THIN PAPERY
947			15.35					52.2	3		SHALE IN THIS RUN
948								37.9	3		
949			82					52.3	2		947.2-3 SANDSTONE LAYER METALLIC MINERAL
950			100					28.5	1		949.82-967.92 OIL SHALE HIGH
951	-30							20.6	1		TO MEDIUM GRADE, BROWN
952								35.4	3		TO DARK BROWN, SOFT TO
953								35.5	3		SEMI HARD, CALCAREOUS
954								20.1	2		(SLIGHT) COMPACTENT ROCK
955			34.43					15.4	2		THIN (1/2" - 1") SANDSTONE LAYERS
956								20.5	1		AND BLEBS ARE BLEEDING
957			15.52					34.4	3		OIL AND GAS
958			113					35.5	0		956.93-959.60 SANDSTONE LAYER CALCAREOUS
959			92					14.7	95.72		959.62-969.84 OIL SHALE MEDIUM
960								10.2			GRADE WITH SOME INTERBEDDED
961	-40							13.4	1		HIGH GRADE, TOWARD TOP OF RUN
962			38					9.7	2		LOW GRADE, TOWARD BOTTOM
963								3.3	2		WHITE TO DARK BROWN, HARD
964			71					35.7	1		(LOW GRADE), SEMI SOFT, MEDIUM
965								36.6	0		TO HIGH GRADE, CALCAREOUS
966								28.4	3		COMPACTENT ROCK SMALL
967								22.3	5		SANDSTONE LAYERS AND BLEBS
968								24.8	5		BLEEDING OIL AND BUBBLING
969			86					31.5	99.2		GAS (1/2" - 1")
970								26.4			969.86-981 OIL SHALE LOW TO
971	-50							1.2	1		MEDIUM GRADE WITH 1 FT
972								15.7	2		OF HIGH GRADE AT 977-978
973								14.2	2		LIGHT TO DARK BROWN, HARD
974								5.4	3		CALCAREOUS, COMPACTENT
975			14.42					17.0	5		ROCK NO PERMEABILITY AND
976			91					23.5	0		LITTLE POROSITY
977								13.9	3		
978								12.0	0		
979			95					13.9	2		
980											TOTAL DEPTH 980