

SYNIANA Drill Hole STA-2
 Location Sec 2, T7S, R25E, Lincoln Co, UT
150 FWT, 25' FSL

Collar Elevation 5769
 Total Depth 117
 Drilled 0-42 Logged By C.R.K.

Depth	Description
0 - 12'	Grayish orange marlstone, siltstone, fine ss (cont. to 12')
12 - 22'	Grayish orange fine ss, silt, marlstone (cont. to 12')
22 - 32'	Lt. blue gray fine ss, silt, marlstone
32 - 42'	Lt. blue gray fine ss, silt, marlstone
42 - 52'	Lt. gray to light gray, marlstone, siltstone, fine ss
52 - 62'	Lt. blue gray fine ss, silt, marlstone
62 - 72'	Lt. blue gray fine ss, silt, marlstone
72 - 82'	Lt. blue gray marlstone, silt, fine ss
82 - 92'	Lt. blue gray marlstone, silt, fine ss
92 - 102'	Lt. blue gray fine ss, silt, marlstone
102 - 112'	Lt. blue gray fine ss, silt, marlstone
112 - 122'	Lt. blue gray fine ss, silt, marlstone
122 - 132'	Lt. blue gray fine ss, silt, marlstone
132 - 142'	Lt. blue gray fine ss, silt, marlstone
142 - 152'	Lt. blue gray fine ss, silt, marlstone
152 - 162'	Lt. blue gray fine ss, silt, marlstone
162 - 172'	Lt. blue gray fine ss, silt, marlstone
172 - 182'	Lt. blue gray fine ss, silt, marlstone
182 - 192'	Lt. blue gray fine ss, silt, marlstone
192 - 202'	Lt. blue gray fine ss, silt, marlstone
202 - 212'	Lt. blue gray fine ss, silt, marlstone
212 - 222'	Lt. blue gray fine ss, silt, marlstone
222 - 232'	Lt. blue gray fine ss, silt, marlstone
232 - 242'	Lt. blue gray fine ss, silt, marlstone
242 - 252'	Lt. blue gray fine ss, silt, marlstone
252 - 262'	Lt. blue gray fine ss, silt, marlstone
262 - 272'	Lt. blue gray fine ss, silt, marlstone
272 - 282'	Lt. blue gray fine ss, silt, marlstone
282 - 292'	Lt. blue gray fine ss, silt, marlstone
292 - 302'	Lt. blue gray fine ss, silt, marlstone
302 - 312'	Lt. blue gray fine ss, silt, marlstone
312 - 322'	Lt. blue gray fine ss, silt, marlstone
322 - 332'	Lt. blue gray fine ss, silt, marlstone
332 - 342'	Lt. blue gray fine ss, silt, marlstone
342 - 352'	Lt. blue gray fine ss, silt, marlstone
352 - 362'	Lt. blue gray fine ss, silt, marlstone
362 - 372'	Lt. blue gray fine ss, silt, marlstone
372 - 382'	Lt. blue gray fine ss, silt, marlstone
382 - 392'	Lt. blue gray fine ss, silt, marlstone
392 - 402'	Lt. blue gray fine ss, silt, marlstone
402 - 412'	Lt. blue gray fine ss, silt, marlstone
412 - 422'	Lt. blue gray fine ss, silt, marlstone
422 - 432'	Lt. blue gray fine ss, silt, marlstone
432 - 442'	Lt. blue gray fine ss, silt, marlstone
442 - 452'	Lt. blue gray fine ss, silt, marlstone
452 - 462'	Lt. blue gray fine ss, silt, marlstone
462 - 472'	Lt. blue gray fine ss, silt, marlstone
472 - 482'	Lt. blue gray fine ss, silt, marlstone
482 - 492'	Lt. blue gray fine ss, silt, marlstone
492 - 502'	Lt. blue gray fine ss, silt, marlstone
502 - 512'	Lt. blue gray fine ss, silt, marlstone
512 - 522'	Lt. blue gray fine ss, silt, marlstone
522 - 532'	Lt. blue gray fine ss, silt, marlstone
532 - 542'	Lt. blue gray fine ss, silt, marlstone
542 - 552'	Lt. blue gray fine ss, silt, marlstone
552 - 562'	Lt. blue gray fine ss, silt, marlstone
562 - 572'	Lt. blue gray fine ss, silt, marlstone
572 - 582'	Lt. blue gray fine ss, silt, marlstone
582 - 592'	Lt. blue gray fine ss, silt, marlstone
592 - 602'	Lt. blue gray fine ss, silt, marlstone
602 - 612'	Lt. blue gray fine ss, silt, marlstone
612 - 622'	Lt. blue gray fine ss, silt, marlstone
622 - 632'	Lt. blue gray fine ss, silt, marlstone
632 - 642'	Lt. blue gray fine ss, silt, marlstone
642 - 652'	Lt. blue gray fine ss, silt, marlstone
652 - 662'	Lt. blue gray fine ss, silt, marlstone
662 - 672'	Lt. blue gray fine ss, silt, marlstone
672 - 682'	Lt. blue gray fine ss, silt, marlstone
682 - 692'	Lt. blue gray fine ss, silt, marlstone
692 - 702'	Lt. blue gray fine ss, silt, marlstone
702 - 712'	Lt. blue gray fine ss, silt, marlstone
712 - 722'	Lt. blue gray fine ss, silt, marlstone
722 - 732'	Lt. blue gray fine ss, silt, marlstone
732 - 742'	Lt. blue gray fine ss, silt, marlstone
742 - 752'	Lt. blue gray fine ss, silt, marlstone
752 - 762'	Lt. blue gray fine ss, silt, marlstone
762 - 772'	Lt. blue gray fine ss, silt, marlstone
772 - 782'	Lt. blue gray fine ss, silt, marlstone
782 - 792'	Lt. blue gray fine ss, silt, marlstone
792 - 802'	Lt. blue gray fine ss, silt, marlstone
802 - 812'	Lt. blue gray fine ss, silt, marlstone
812 - 822'	Lt. blue gray fine ss, silt, marlstone
822 - 832'	Lt. blue gray fine ss, silt, marlstone
832 - 842'	Lt. blue gray fine ss, silt, marlstone
842 - 852'	Lt. blue gray fine ss, silt, marlstone
852 - 862'	Lt. blue gray fine ss, silt, marlstone
862 - 872'	Lt. blue gray fine ss, silt, marlstone
872 - 882'	Lt. blue gray fine ss, silt, marlstone
882 - 892'	Lt. blue gray fine ss, silt, marlstone
892 - 902'	Lt. blue gray fine ss, silt, marlstone
902 - 912'	Lt. blue gray fine ss, silt, marlstone
912 - 922'	Lt. blue gray fine ss, silt, marlstone
922 - 932'	Lt. blue gray fine ss, silt, marlstone
932 - 942'	Lt. blue gray fine ss, silt, marlstone
942 - 952'	Lt. blue gray fine ss, silt, marlstone
952 - 962'	Lt. blue gray fine ss, silt, marlstone
962 - 972'	Lt. blue gray fine ss, silt, marlstone
972 - 982'	Lt. blue gray fine ss, silt, marlstone
982 - 992'	Lt. blue gray fine ss, silt, marlstone
992 - 1002'	Lt. blue gray fine ss, silt, marlstone

3YN-2

9767

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Location Sec 2, T.5, R.25E, Uintah Co, UT
750 FSL, 250 FSL

Total Depth

177

Drilled

412' - 803'

Logged By

4125

	Depth	Description
42	412	Pale yellowish brown oil shale
412	422	Lt olive gray mudstone oil shale
422	432	Lt olive gray mudstone oil shale
432	442	Lt olive green oil shale
442	452	Pale reddish brown oil shale
452	462	Pale yellowish brown mudstone oil shale
462	472	Dk yellowish brown mudstone oil shale
472	482	Pinkish brownish green sandstone oil shale
482	492	Pale yellowish green mudstone oil shale
492	502	Pale yellowish brown oil shale
502	512	Lt olive gray mudstone oil shale
512	522	Lt olive gray mudstone oil shale
522	532	Lt greenish brown oil shale
532	542	Lt green mudstone oil shale Salinity 1050 ppm, thin bedded to massive
542	552	Dark bluish brown oil shale
552	562	Dark yellowish brown oil shale
562	572	Dark yellowish brown oil shale
572	582	Dark yellowish brown oil shale
582	592	Dark yellowish brown oil shale
592	602	Dark yellowish brown oil shale
602	612	Dark yellowish brown oil shale
612	622	Dark yellowish brown oil shale
622	632	Dark yellowish brown oil shale
632	642	Dark yellowish brown oil shale
642	652	Dark yellowish brown oil shale
652	663	Dusky yellowish brown oil shale
663	673	Dusky yellowish brown oil shale
673	683	Dusky yellowish brown oil shale
683	693	Dusky yellowish brown oil shale
693	703	Dusky yellowish brown oil shale
703	713	Dusky yellowish brown oil shale
713	723	Dusky yellowish brown oil shale (stopped 11/4 hrs)
723	733	Dusky yellowish brown oil shale
733	743	Dusky yellowish brown oil shale
743	753	Dusky yellowish brown oil shale
753	763	Dusky yellowish brown oil shale
763	773	Dusky yellowish brown oil shale
773	783	Dusky yellowish brown oil shale
783	793	Dusky yellowish brown oil shale

SYNANA Drill Hole SYN-2
 Location Sec 2, T9S, R25E, Uintah Co, UT
750 FWL, 250 FSL

Collar Elevation 5767
 Total Depth 1177
 Drilled 803-960

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Logged By CRP

Depth	Description
711	dark yellowish brown oil shale
713 723	dark yellowish brown oil shale
823 841	dark yellowish brown oil shale
841 843	dark yellowish brown oil shale
843 853	dark yellowish brown oil shale
853 863	dark yellowish brown oil shale
863 873	dark yellowish brown oil shale
873 883	dark yellowish brown oil shale
883 893	dark yellowish brown oil shale
893 903	dark yellowish brown oil shale
903 913	dark yellowish brown oil shale
913 923	dark yellowish brown oil shale
923 933	dark yellowish brown oil shale
933 943	dark yellowish brown oil shale
943 953	dark yellowish brown oil shale
953 960	dark yellowish brown oil shale & yellow (tuff?) streaked @ 1410, 110/13 30'

Location S. C. Z. T95 R25E 750 FWSL, 250 FSL

Total Depth 1177

Drilled 760' - 770' Logged By F.E.

[illegible]

SYNANA Drill Hole SYN-2
 Location Sec 2, T10 R25E, 750 FWSL, 250 FSL

Collar Elevation 5769

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Total Depth 1177

Drilled 970' - 1177' Logged By J. H. C.

Recovery				Core Run		Depth	Yield		Spent	Description
RQD		Total		Ft	Min		g/t		Shale	
%	Ft	%	Ft				Oil	Water	%	
						970				
							11.7	1.9	93.5	6 FWSL 1/4" d. 1/2" to 1/4" sand
							12.2	6.0	91.6	
							12.2	6.5	91.8	W/100% sand 772-773.7
							11.2	7.2	91.9	
						975	12.0	6.0	91.8	
							11.9	2.9	93.2	
							11.7	2.2	93.3	
							11.4	2.2	93.6	
							15.4	2.2	91.9	
26		199		22	98	1000	15.2	2.6	91.8	5 FWSL 1/4" d. 1/2" to 1/4" sand
							14.6	1.9	92.4	
							23.4	3.1	87.7	W/100% sand, fairly horizontal
							12.8	2.9	91.8	700 to CA
							11.5	2.9	93.4	
						1005	9.8	1.9	94.8	
							7.2	1.9	95.8	
							7.8	1.7	95.8	
							12.2	1.2	93.6	
							13.0	1.6	93.1	
						1010	15.3	1.4	92.7	
							5.4	1.4	95.1	W/100% sand, fairly horizontal
							6.7	1.2	96.1	
							8.2	1.9	94.9	
							8.5	2.2	94.7	
						1015	5.3	1.4	96.4	
							9.6	1.9	94.5	
							17.5	1.7	91.1	
							14.5	1.7	92.5	
							11.6	1.7	93.3	

SYNANA Drill Hole SYN-2Collar Elevation 5769Page 6 of 1Location 3002, T15, R25ETotal Depth 117750' FUL, 25' FSLDrilled 1120' - 1050'Logged By CH

Recovery				Core Run		Depth	Yield		Spent	Description
RQD		Total		Ft			g/t		Shale	
%	Ft	%	Ft	Ft	Min		Oil	Water	%	
						1020	9.6	1.2	94.9	BROWN OIL SHALE, TYPICAL PLANNED SECTION
							14.2	1.7	92.4	
							35.8	2.3	92.4	
							17.2	1.7	71.3	
						115	11.3	1.4	93.9	
							14.2	2.4	92.3	
							15.4	2.4	71.8	
							14.2	2.0	97.4	
							13.9	1.9	92.7	
						1030	18.6	1.8	90.7	
							31.5	2.3	84.6	
							15.2	1.7	92.1	
							16.4	1.2	91.9	
							15.2	1.7	90.8	
						1035	32.4	2.6	88.9	
							17.3	1.7	91.2	
							7.4	1.3	95.2	Agroove
							5.4	1.2	96.5	
							5.5	.7	96.5	
						115	4.2	1.2	97.0	
							2.6	1.7	97.6	
							8.8	1.7	94.9	
							16.1	1.7	94.1	
							4.5	1.3	97.1	
						1045	5.5	.7	97.0	
							4.2	1.0	97.2	
							2.5	1.2	97.9	
							1.9	1.1	97.1	
							2.6	1.0	97.9	

Agroove

SYN-2 1130, 10100

SYN-2 1130, 10100

SYN-2 1130, 10100
 1130 - 1140' OIL SHALE, TYPICAL PLANNED SECTION
 1140 - 1150' OIL SHALE, TYPICAL PLANNED SECTION
 1150 - 1160' OIL SHALE, TYPICAL PLANNED SECTION
 1160 - 1170' OIL SHALE, TYPICAL PLANNED SECTION

SYNANA Drill Hole SYN-2

Collar Elevation 5769

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Location 150' FWL, 255' FBL SOL 2, T95, N15E

Total Depth 1177

Drilled 1150' - 1180' Logged By

Wintab Co, UT

Recovery				Core Run		Depth	Yield		Spent Shale
RQD		Total		Ft	Min		g/t		
%	Ft	%	Ft				Oil	Water	
						1050			
						X	13.0	1.7	93.1
							19.0	1.8	92.6
							12.1	2.6	93.1
						X	30.2	3.6	84.6
						1055	27.9	2.9	86.1
							17.9	2.8	90.6
						X	16.1	3.1	91.1
							11.1	2.7	93.4
							14.3	4.9	91.4
						1060	20.9	5.5	88.1
						X	24.5	4.2	86.6
						X	26.7	2.4	86.6
							22.4	2.9	88.4
						X	36.0	2.4	83.2
						X	34.4	4.8	81.9
						X	31.9	2.9	85.1
						X	25.4	2.2	87.4
						X	20.4	2.6	89.3
							15.8	2.4	91.4
						D 1070	16.5	2.2	93.3
							18.0	2.6	87.5
							21.3	2.9	87.9
						X	14.0	2.9	92.2
						X	12.0	2.4	93.2
						D 1075	13.7	2.2	92.0
							12.1	5.0	92.9
							14.7	1.0	94.1
						X	8.4	1.2	95.2
						D	11.4	1.7	94.1

SAMPLES FOR ROCK PROPERTIES TESTING

X for Brazilian

□ R- Compression

1060.3 - 1061.4 5' False Tuff Marker

1061.4 - 1062.5 1' False Tuff Marker

1062.5 - 1063.6 1' False Tuff Marker

1063.6 - 1064.7 1' False Tuff Marker

1064.7 - 1065.8 1' False Tuff Marker

1065.8 - 1066.9 1' False Tuff Marker

1066.9 - 1068.0 1' False Tuff Marker

1068.0 - 1069.1 1' False Tuff Marker

1069.1 - 1070.2 1' False Tuff Marker

1070.2 - 1071.3 1' False Tuff Marker

1071.3 - 1072.4 1' False Tuff Marker

1072.4 - 1073.5 1' False Tuff Marker

1073.5 - 1074.6 1' False Tuff Marker

1074.6 - 1075.7 1' False Tuff Marker

1075.7 - 1076.8 1' False Tuff Marker

1076.8 - 1077.9 1' False Tuff Marker

WYOMING Dr. 12 Hole SYN-2
 Location Sec 2, T7S, R25E, Uintah Co, UT,
750 FWL, 250 FSL

Collar Elevation 5760
 Total Depth 1177
 Drilled 1050' - 1080'

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Logged By PJL

Recovery				Core Run		Depth	Yield		Spent	Description	
HOB	Total			Ft	Min		g/t		Shale		
	Ft	%	It				Oil	Water	%		
167	20.0	0.1	90	-	-	1080	29.9	3.2	85.1	BROWN OIL SHALE, THINLY LAMINATED 2' to 4' CA @ 1080.2: 3/4" tuff bed (oil) @ 1083.3: 3/4" tuff bed	
						37.3	3.8	80.3			
						21.7	3.4	82.6			
						18.3	2.4	91.0			
						1085	21.3	1.7	89.6	@ 1086.9: 1" tuff bed (oil) @ 1088.1: 1/2" tuff bed @ 1087.3 - 1087.7 sand, tuff bed (oil) (oil) (oil)	
						15.4	1.7	92.1			
						22.6	2.3	85.9			
						38.8	3.4	80.7			
						-	26.8	2.0	86.7		
							1090	25.6	1.7	74.3	@ 1091.3 - 1093.7 sand, tuff bed (oil)
							49.4	1.7	72.1		
							53.7	2.6	74.3		
						62.5	2.7	70.3			
						-	52.5	2.4	74.4		
							1095	43.2	2.2	79.5	@ 1095.8: 1/2" sand bed @ 1097.1 - .4 tuff bed
							36.3	1.7	82.8		
							42.2	1.9	78.5		
						24.9	1.4	87.5			
						-	19.3	1.4	90.1		
							1100	18.7	1.2	95.3	ST 01115, 17' thick EUBOCHUS 7' 11" 3' BROWN OIL SHALE, THINLY LAMINATED 2' 25" - 400' 4' CA
							25.6	1.6	87.2		
							45.3	2.4	78.0		
						19.0	1.8	93.1			
						-	14.9	1.7	92.1		
							1105	16.9	1.4	91.5	@ 1107.1: 1/2" sand
							32.9	1.8	84.2		
							43.6	1.9	79.6		
						32.1	1.9	84.7			
-	34.3	1.9	83.7	@ 1107.1: 1/2" sand							

117

20.0

0.1

90

AVIANA Drill Hole

SYN-2

Collar Elevation 5769

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Location Sec 2, T9S, R25E Uintah Co, UT

Total Depth 1177

750 FSL 750 FSL

Drilled 1110'-1140'

Logged By

Recovery				Core Run		Depth	Yield		Spent Shale	Description
RQD		Total		ft	Min		g/t			
%	ft	%	ft				Oil	Water	%	
						1110				
						□	20.2	1.5	90.1	@ 1111.1: 1/2" buff bed
							34.2	3.1	83.2	
							17.0	1.7	91.4	@ 1113.4: 1/4" buff bed
							15.2	1.9	92.0	
						1115	14.4	2.0	92.1	
						□	29.5	3.8	84.6	@ 1116.3: 1/2" buff bed
						□	33.5	3.6	82.2	@ 1116.7: 3/4" buff bed
							15.4	3.6	91.0	@ 1116.9: 1/2" buff bed
						□	10.9	3.4	93.2	
22.3		22.3		22.3	75	1120	13.9	1.7	92.9	5.10 0.2 151180 END RUN @ 120.3
							20.3	1.9	90.2	BR MIN 0.5 SPACE THINLY LAMINATED 15-22 CA
						□	35.9	2.9	82.7	
							36.3	2.0	82.6	
							32.4	2.5	84.6	@ 1124.1: 1/4" buff bed
						25	22.6	1.9	89.3	
						□	23.5	2.2	88.4	
							27.5	2.4	86.5	
							29.9	3.4	85.0	
						□	19.7	3.1	89.5	
						1130	18.3	2.6	89.4	@ 1130.1: 1/4" buff bed
							12.7	2.4	92.9	
							10.0	1.9	94.4	
							13.1	2.2	92.6	@ 1133.8: 1/4" buff bed
						□	21.1	3.4	88.5	@ 1134.1: 3/4" buff bed
						1135	12.7	3.1	92.1	@ 1134.3: 1/4" buff bed
							8.9	3.1	94.0	@ 1135.9: 1/4" buff bed
							6.9	2.9	95.1	
						□	4.9	1.9	96.4	
							6.0	2.6	95.7	

Total Depth 1177

Drilled 1176'-1176 7' Logged By CBE

[illegible]