

U85

U085

SYNTANA Drill Hole SYN-5Collar Elevation 5604Page 6 of 18Location 336 FSL, 915 FWL Sec 32, T9S, R24E  
Uintah Co, UTTotal Depth 2065Drilled 1684-1710Logged By VDD, CRB

Recovery				Core Run		Depth	Yield		Spent
RQD		Total		Ft	Min		g/t		Shale
%	Ft	%	Ft				Oil	Water	%
						1680			
							7.4	0.5	96.2
							5.2	1.0	96.9
							8.5	0.5	95.4
							10.4	0.7	94.6
							9.2	0.7	95.3
						1690	7.6	0.8	95.9
							13.2	1.4	93.1
							14.3	1.0	92.7
							10.4	1.0	94.5
							9.4	1.0	95.3
							8.2	1.2	95.5
							7.1	1.2	96.0
							6.8	1.0	96.3
							24.6	1.8	87.7
							20.6	1.4	89.0
						1700	10.7	1.0	94.7
							7.1	1.2	96.0
							6.7	1.1	96.3
95	185	100	19.5	19.5	75		7.5	0.7	96.0
							9.5	1.0	95.2
							18.3	1.2	91.0
							18.5	1.1	90.5
							10.1	1.7	94.5
							8.3	1.4	95.4
							9.7	1.3	94.8
						1710	9.4	1.3	95.2

Top Core 1684.0

Brown thinly lam oil shale

Beds 85

Tuff bed to 80mm 1691.2 (oil)  
10mm 1692.5 (oil)

Fracture 1702.4-1703.8 @ 30° to CA

1703.5 End Run 1  
80° beds

Beds 85-90° CA

95 185 100 19.5 19.5 75

SYNTANA Drill Hole SYN-5Collar Elevation 5604.2Page 7 of 18Location 336 FSL, 915 FWL Sec 32, T9S, R24ETotal Depth 2065Uintah Co, UTDrilled 1710 7740Logged By VDD, CRB

Recovery				Core Run		Depth	Yield		Spent	
RQD		Total					g/t		Shale	
%	Ft	%	Ft	Ft	Min		Oil	Water	%	
						1710	11.4	1.2	94.4	
							26.6	2.2	87.0	
							16.2	1.3	91.9	
							9.6	1.3	95.1	
							9.6	1.2	94.9	
							10.1	1.1	94.7	
							11.2	1.0	94.2	
							11.7	0.7	93.7	
							13.0	1.0	93.7	
						1720	13.3	1.2	93.3	
							16.4	2.2	91.4	
							16.4	1.7	91.6	
							12.9	1.4	93.2	
							13.6	1.6	92.9	
							14.8	1.0	92.6	
							14.2	1.2	92.8	
							13.2	1.2	92.9	
							11.4	1.1	94.2	
							13.3	1.1	93.5	
						1730	15.2	1.2	92.6	
							14.2	1.2	93.1	
							14.5	1.1	93.1	
							11.7	1.1	93.6	
							14.1	1.7	93.0	
							14.7	1.8	92.4	
							14.9	1.4	92.6	
							14.0	1.7	92.8	
							13.1	1.8	93.1	
							15.2	1.7	92.5	
100	34.8	100	34.8	34.8	150	1740	15.2	1.7	92.5	

Tuff bed to 5mm @ 1710.4  
bed to 10mm @ 1710.5Tuff bed to 30mm @ 1718.8  
bed to 5mm @ 1719.3  
bed to 20mm 1719.4  
bed to 10mm 1720.3

Bed @ 85% A

bed to 5mm @ 1727.5

Tuff bed to 10mm @ 1731.0 (oil)  
to 12mm @ 1731.5

@ 1734.2 is 3mm tuff bed

1738.3 End Run 2 oily tuff bed broken all of  
bottom of run, at least 140mm thick

100 348 100 34.8 34.8 150

Recovery				Core Run		Depth	Yield		Spent	Description
RQD		Total		Ft	Min		g/t		Shale	
%	Ft	%	Ft				Oil	Water	%	
						1740	15.2	1.7	92.8	5.7 ft drilled, 3.2 ft recovered 1738.3 - 1744.0 all less than 4 in RQD = 0 contains at least 1 oil-filled tuff bed of unknown thickness
							15.2	1.7	92.8	
							15.2	1.7	92.8	
							15.2	1.7	92.8	
							14.5	1.3	92.6	
							23.5	1.9	89.0	3 mm tuff bed @ 1747.2 (0.1) 7 mm tuff bed @ 1748.5 (0.1) 70 mm tuff bed @ 1748.8 (oil) contorted bedding
							29.0	2.0	86.4	
							22.2	1.8	89.5	
							23.9	2.2	88.3	
						1750	24.3	2.2	87.9	
							20.2	2.0	89.8	5 mm tuff bed @ 1751.2 (0.1)  3 mm tuff bed @ 1754.2
							15.8	1.7	91.6	
							12.8	1.7	92.9	
							10.6	1.4	94.3	
							10.3	1.7	94.5	
							11.7	1.4	93.8	16 mm tuff bed (oil) @ 1755.7 3 mm tuff bed (oil) @ 1756.1 3 mm tuff bed (oil) @ 1757.0
							15.7	1.7	91.7	
							10.6	1.6	94.3	
							8.3	1.7	95.0	
						1760	8.1	1.2	95.8	
							11.0	1.2	94.5	Tuff blebs to 20 mm @ 1761.7 (0.1) bed @ 1763.1 " bed @ 1766.5  rich oil shale
							27.6	2.2	94.5	
							20.6	1.7	90.1	
							10.8	1.4	94.5	
							9.9	1.9	94.6	
							7.7	1.4	95.4	
							8.6	1.6	95.3	
							12.5	1.3	93.6	
							13.2	1.4	93.2	
						1770	9.2	1.7	94.9	

SYNTANA Drill Hole

SYN-5

### Collar Elevation

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### Location

336 FSL, 915 FWL Sec 32, T9S, R24E

### Total Depth

2065

Uintah Co., UT

Drilled

1770-1800

Logged By

VDD, CRD

Recovery				Core Run		Depth	Yield		Spent
RQD		Total		Ft	Min		g/t		Shale
%	Ft	%	Ft				Oil	Water	%
						1770			
							5.6	1.8	96.5
							6.0	1.4	96.0
							8.9	1.7	94.6
							8.6	1.9	94.9
82	50.3	99	33.6	36.8	130		8.1	1.2	95.5
							8.3	1.7	95.2
							9.4	1.9	94.5
							10.5	1.9	93.4
							16.6	1.7	91.5
						1780	43.5	2.4	79.0
							15.7	1.2	92.2
							9.1	1.2	95.0
							8.5	1.3	95.3
							8.0	1.2	95.6
						1785	8.0	1.1	95.7
							9.8	1.2	94.8
							14.5	1.2	92.7
							14.0	.7	93.2
							13.4	.7	93.5
						1790	10.9	1.2	94.7
							11.5	1.1	94.2
							13.4	1.0	93.1
							16.7	1.4	91.7
							40.5	1.7	80.1
						1795	15.6	1.2	92.3
							19.8	1.7	90.2
							19.6	1.9	90.0
							9.6	1.4	94.9
							8.1	1.7	95.4
						1800	9.5	1.7	94.8

Location 336 FSL, 915 FWL Sec 32, T9S, R24E

Total Depth

2065

Uintah Co., UT

Drilled

1800-1830

Logged By

VDD, CRD

Recovery				Core Run		Depth	Yield		Spent
RQD		Total		Ft	Min		g/t		Shale
%	Ft	%	Ft				Oil	Water	%
98	39.4	99	39.7	40.0	120	1800	9.1	1.8	94.9
						8.5	1.7	95.1	
						6.7	1.7	95.8	
						13.3	1.6	93.1	
						1805	30.6	2.2	84.9
						13.8	1.4	92.9	
						10.2	1.2	94.5	
						9.1	1.3	95.2	
						8.6	1.7	95.2	
						1810	7.4	1.7	95.7
						7.8	1.7	95.6	
						20.4	1.9	89.8	
						26.3	1.9	87.1	
						11.8	1.4	93.9	
						1815	10.1	1.4	95.1
						12.8	.7	94.0	
						10.8	.7	94.7	
						12.9	.7	93.7	
						12.2	.7	94.2	
						1820	11.4	.7	94.4
						13.5	.2	93.4	
						12.4	.5	94.3	
						11.8	.6	94.4	
						11.6	.4	94.2	
						1825	14.8	.4	93.2
						11.9	.8	94.2	
						13.6	.5	93.5	
14.6	.7	92.9							
13.8	.7	93.3							
1830	11.1	.5	94.6						

Description

Brown thickly laminated oil shale

Tuff bed to 15 mm @ 1806.5

" " to 15 mm 1808.1

@ 1811.1 - 1813.1 are

Alternating dark &amp; buff colored bands - Zebra

End Run II 4 @ 1814.8

Tuff bed to 5 mm @ 1815.4

Frac @ 10" to GA

Tuff bed to 12 mm @ 1821.4  
15 mm @ 1822.8  
40 mm @ 1823.0 (oil)

Tuff bed to 40 mm @ 1824.6 (oil)

Tuff beds 5 mm @ 1828.5  
20 mm @ 1828.6  
20 mm + 10 mm @ 1828.9

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Location

336 FSL, 915 FWL, Sec 32, T9S, R24E

Total Depth

2065

Uintah Co., UT

Drilled

1830-1860

Logged By

VDD, CRB

Recovery				Core Run		Depth	Yield		Spent
RQD		Total		Ft	Min		g/t		Shale
%	Ft	%	Ft				Oil	Water	%
						1830	13.0	1.0	93.5
							19.4	1.0	90.8
							15.8	1.2	92.3
							10.2	1.0	94.9
							12.9	1.0	93.7
							10.9	1.2	94.4
							9.7	1.2	94.5
							4.2a	1.2	97.0
							3.3a	1.4	97.4
						1840	9.6	1.3	94.8
							24.9	1.2	87.8
							13.9	1.2	93.0
							10.2	1.2	94.7
							16.0	.5	92.8
							11.5	.5	94.2
							14.4	1.0	92.8
							19.0	.6	91.3
							14.9	.7	92.8
							12.1	.5	94.3
						1850	12.2	.8	94.0
							9.3	.8	95.3
							9.1	.7	95.3
							9.9	.7	95.1
							12.5	1.0	93.7
100	40.0	100	40.2	40.0	125		18.6	1.0	91.4
							19.7	1.0	90.5
							21.6	1.2	89.5
							12.7	.7	93.5
							12.1	.7	94.0
						1860	10.1	.7	94.9

Description

Tuff bed to 30mm @ 1834.0

Vert. frac (clean) 1843.7-1845.8

Tuff bed to 10 mm @ 1845.4  
 bed 6 mm @ 1846.0  
 " 107 mm @ 46.2 (oil)  
 " 80 mm @ 1849.8  
 " 25 mm @ 1851.5  
 " 15 mm @ 1854.6  
 bed 70 mm @ 1854.9

End Run #5 @ 1855.0

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Uintah Co, UTTotal Depth 2065Drilled 1860-1890 Logged By VDD, CRB

Recovery				Core Run		Depth	Yield		Spent
RQD		Total		Ft	Min		g/t		Shale
%	Ft	%	Ft				Oil	Water	%
						1860	7.9	.7	95.9
							8.8	.7	95.6
							12.1	.7	94.3
							14.7	.7	93.1
						1865	11.6	.8	94.2
							7.2	1.3	95.6
							8.0	1.0	95.7
							9.1	.6	95.5
							7.7	.7	96.0
						1870	6.6	1.1	96.2
							15.7	.7	91.7
							16.9	.8	91.8
							14.3	.5	93.3
							9.7	.7	95.1
							9.8	.5	95.2
							11.0	.7	94.5
							11.1	.5	94.9
							15.9	.2	93.2
							10.6	.2	95.1
						1880	11.8	.7	94.2
							20.4	1.0	90.4
							14.0	.5	93.1
							12.5	.7	94.2
							11.9	.5	94.7
							10.2	.5	95.2
							8.6	.7	95.6
							20.3	1.6	90.2
							12.9	3.6	92.5
							12.7	4.4	92.4
						1890	12.5	2.6	93.1

G. lsomite vert frac 1864-1871. &lt; 1mm thick

Tuff blebs to 10mm @ 1881.0

Tuff bed to 10mm @ 1886.8

1887.1  
Wavy Tuff marker  
1889.3

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#7 16.8  
#8 40.0  
#9 39.7  
#10 40.2  
#11 32.7

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Location

336 FSL, 915 FWL Sec 32, T9S, R24E  
Uintah Co., UT

Total Depth

2065

169.4

Drilled

1890-1920

Logged By

VDD, CRB

Recovery				Core Run		Depth	Yield		Spent
RQD		Total		Ft	Min		g/t		Shale
%	Ft	%	Ft				Oil	Water	%
						1890	12.7	1.0	93.7
							12.9	.7	93.4
							13.0	.5	93.4
							17.9	1.0	91.4
							17.1	.7	92.0
99	39.9	100	40.3	40.3	140		13.8	1.0	93.1
							22.8	1.0	89.3
							33.0	1.2	83.9
							14.0	.7	93.2
						1900	11.3	.7	94.3
							13.9	.7	93.0
							14.5	.7	92.8
							15.2	.7	92.6
							14.9	.5	92.8
							18.5	.7	91.3
							40.7	1.7	80.2
							19.6	.7	90.6
							14.5	1.0	92.8
							17.7	1.0	91.6
						1910	25.3	1.4	87.7
							33.4	1.2	84.4
100	16.7	100	16.7	16.7	95		15.8	1.0	92.3
							7.9	.5	95.9
							6.2	.7	96.5
							6.1	.7	96.6
							3.4a	.6	97.9
							6.4	.7	96.3
							12.9	.5	93.7
							7.5	.2	96.5
						1920	4.8a	.7	97.0

End Run #6 @ 1895.3

Beds @ 85°

Tuff 666 to 15mm @ 1906.4  
bed 10m @ 1909.8  
666 15m @ 1910.5

1912.0 End Run 7

Agroove

Tuff bed to 15 @ 1914.1  
70 @ 1918.1 (6.1)2 Vert frac 1916.5-1918.5, 1mmth, calc. lined  
1915.9-1919 minor g. isomite



Location 336 FSL, 915 FWL Sec 32 T9S, R24E

Total Depth

2065

Uintah Co., UT

Drilled

1920-1950

Logged By

VDD, CRB

Recovery				Core Run		1	Depth	Yield		Spent
RQD		Total		Ft	Min			g/t		Shale
%	Ft	%	Ft					Oil	Water	%
							1920			
								3.7a	.4	97.8
								2.6a	1.0	97.9
								3.5a	.7	97.3
								4.3a	.7	97.2
						x		14.8	1.2	92.7
						x		11.4	1.0	94.2
								23.9	1.4	87.9
						□		41.5	1.9	80.5
								17.2	1.2	91.6
						x	1930	16.8	1.0	91.8
								14.3	.7	93.0
								12.8	.7	93.6
								19.7	.7	90.4
						x		25.3	.7	87.5
								30.8	1.0	83.5
								22.6	1.7	88.9
						x		27.6	1.4	86.8
								39.2	1.4	81.1
						x		41.6	1.4	80.9
						□	1940	33.7	1.2	84.4
						□		23.9	1.0	88.6
						x		21.2	1.0	89.8
						x		17.6	.7	91.0
						x		13.5	.7	93.2
						□		15.5	.7	92.5
								24.1	1.0	88.7
						x		18.9	.7	91.2
								12.2	.7	94.2
						x		14.8	.7	92.9
							1950	11.4	.8	94.2

X = Brazilian test  
 □ = Compression test

Description

Brown heavy lam. oil s

A groove

Contort beds

Tuff bed to 10m @ 1926.9

bleb to 3m @ 1926.9

bed to 30mm @ 1929.0 oil

bed to 10 1929.6

bleb to 10 1929.6

bleb 12 1931.3 heavy oil

bed 10 1931.5 " "

20 1932.0 " "

Contort bed  
 1932.9-1933.5 False mkr

rich oil shale

bleb 5 1938.1

bed 10 1938.1

bed 15 1938.3

bed 25 1939.1

20 1940.0

1949.7-1949.9 Mahoning mkr (Hvy oil)

SYNTANA Drill Hole

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Collar Elevation

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Location 336 FSL, 915 FNL Sec 32, T9S, R24E

Total Depth

2065

Hintah Co., UT

Drilled

1950-1980

Logged By

VDD, CRB

Recovery				Core Run		Depth	Yield		Spent	Description
RQD		Total		Ft	Min		g/t		Shale	
%	Ft	%	Ft				Oil	Water	%	
69	27.5	100	400	400	150	1950	10.6	.7	94.8	1952.2 End Run 8
							9.9	.7	95.0	
							10.5	.5	94.9	
						X	12.7	.8	93.5	
							16.2	1.0	92.2	
							50.5	1.7	76.1	Tuff bed to 19mm @ 1954.8
							33.0	1.7	84.0	
							21.5	1.0	89.8	
							22.8	1.0	89.3	
						1960	19.4	.7	90.8	
							20.3	.5	90.6	crumbly bedding fracs 1964.9-65.2 v. rich oil sh
							34.1	.8	84.4	
							29.3	1.0	86.4	
							34.1	1.0	84.5	
							71.2	1.9	68.0	
							82.8	2.2	62.0	zebra intercalated buff & dark to contorted bed v. rich oil sh
							50.5	1.4	77.8	
							78.3	2.9	63.9	
							67.3	2.2	68.8	broken bedding fracs 1970.5-1970.7
						1970	43.4	1.4	80.1	
							56.6	1.4	73.4	
							36.5	1.6	82.7	Tuff bed to 70mm @ 1971.2 bed to 20mm @ 1971.5
							22.1	1.7	88.8	
							19.8	1.3	90.1	
							20.7	1.4	89.8	rich oil sh
							35.6	1.2	83.6	
							36.2	1.2	83.4	
							37.3	1.7	82.3	
							19.4	1.7	90.2	
						1980	16.5	1.4	91.5	

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Uinta Co, UTTotal Depth 2065Drilled 1980-2010Logged By VDD, CRB

Recovery				Core Run		Depth	Yield		Spent	Description	
RQD		Total					g/t		Shale		
%	Ft	%	Ft	Ft	Min		Oil	Water	%		
97	38.6	100	39.7	39.7	140	1980					
							18.2	1.4	91.0	Tuff bed to 15mm @ 1984.0 (crumbl)	
						□	20.5	1.7	90.0		
							38.2	1.3	81.7		
							57.1	1.2	74.2		
						□	49.2	1.2	77.6		
							26.0	.7	87.9		
							21.4	.5	90.6		
						□	21.0	.7	90.4		
							34.2	1.0	84.6		
						1990	26.6	.5	87.7		
							19.3	1.0	90.7		1991.7 End Run 9
							18.2	.7	91.4		
							17.4	.7	91.8		
						□	29.0	1.0	86.2		
							41.1	1.4	80.3		
							18.1	1.2	91.0		Tuff bed to 20mm @ 1996.2 Vert. frac. 1996-7 bed to 20mm @ 1996.4
							12.5	.5	93.3		
							13.1	.5	93.2		
							15.4	.5	92.7		
						2000	19.1	.5	91.3		
							37.8	1.0	83.4		Tuff bed to 50mm @ 2003.9
						□	38.2	1.0	83.0		
							34.0	.7	84.9		
							26.4	1.2	87.9		
□	24.3	1.0	88.7								
	27.8	1.0	87.1								
	37.9	.7	82.9								
	27.9	.5	87.2								
	23.4	1.0	88.9								
2010	21.6	1.4	89.4								

Location 336 FSL, 915 FWL, Sec 32, T9S, R24E  
Uintah Co., UT

Total Depth

2065

Drilled

2010-2040

Logged By

VDD, CRB

Recovery				Core Run		Depth	Yield		Spent	Description
RQD		Total		Ft	Min		g/t		Shale	
%	Ft	%	Ft				Oil	Water	%	
						2010	15.7	1.0	92.4	
							11.8	.7	93.8	
							10.5	.5	94.6	
							18.3	.7	91.5	
							30.7	1.2	85.0	
							11.1	.7	94.3	Vert
							13.9	.7	92.7	Frac. @ 2016.6 - 2017.3
							11.1	.7	94.5	
							5.1a	.7	96.9	Vert
						2020	9.0	.7	95.6	Frac. @ 2022.4 - 2022.6
							14.4	1.2	92.9	U. Frac @ 2023 - 2025 gilsonite coated
							19.9	1.0	90.9	
							7.9	3.1	95.0	← LINTY Tuff bed 100 mm @ 2022.8 oil
							5.7	3.1	95.3	
							12.8	.7	93.8	
							26.9	1.0	87.3	
							17.7	1.0	91.2	
							10.4	.7	94.6	
							9.4	.7	95.2	Vert. Frac. @ 2027.9 - 2029.9
						2030	10.9	.7	94.5	
							19.6	1.4	90.0	Tuff bed to 5mm @ 2029.8
							49.0	1.9	76.8	" bled to 5mm @ 2030.0
96	388	100	40.2	40.2	140		16.7	1.2	91.7	2031.9 End Run 10 bed to 15mm @ 2032.70
							8.2	.7	95.6	Tuff " bled 5 " @ 2036.1
							5.6	.7	96.5	" bled 10 " @ 2036.6
							3.3a	1.0	97.5	
							2.8a	1.4	97.8	
							4.8a	1.4	96.9	
							9.1	1.0	95.2	
						2040	24.8	1.9	87.9	Curly Content bed 2039.7 - 2039.8 Curly 2039.8 - 2041.1

SYNTANA Drill Hole SYN-5

Collar Elevation 5604

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Location 336 FSL, 915 FAX, Sec 32, T9S, R24E  
Uintah Co., UT

Total Depth 2065

Drilled 2040-2065

Logged By *VDD*

[illegible]