

#### FINAL CORE ANALYSIS REPORT

SUNCOR OB LEWIS 100/11-27-092-08W4M/0 WELL LICENCE #: 0473422

**Prepared for:** 

SUNCOR ENERGY INC. RC31252

March 2015

"In Pursuit of Excellence"

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Sample Handling

Abbreviations

Core Logs

**CORE ANALYSIS DATA** 

SUNCOR OB LEWIS 100/11-27-092-08W4M/0

: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

FORMATION : SHELL LAKE MEMBER/KEG RIVER
WELL NAME : SUNCOR OB LEWIS
DRILLING FLUID : WATER BASE MUD

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	Inte	rval	Rep	Sample	Ga	s Permea	bility	Capacity			De	nsity	Res	idual	
		n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity		g/m³)		ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø⋅m	Bulk	Grain	Oil	Water	Remarks
								•	•				•		
					CORE	NO. 30	183.50 - 186.5	0 (CUT/REC	EIVED = 3.	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
001	183.50	184.67	1.17	0.10	5.41	4.93	2.47	6.33	0.161	0.188	2260	2700	-	-	ls:vfxln:ppvugs:arg:styl:fracs
002	184.67	186.50	1.83	0.10	0.85	0.80	0.16	1.56	0.107	0.196	2390	2680	-	-	ls:vfxln:ppvugs:arg:styl:fracs
					CORE	NO. 31	186.50 - 189.5	0 (CUT/REC	EIVED = 3.	00 / 3.00 m	TOTA	L BOXES	8 = 2)		
NA	186.50	189.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 32	189.50 - 192.5	0 (CUT/REC	EIVED = 3.	00 / 3.00 m	TOTA	L BOXES	S = 2)		
NA	189.50	192.50	3.00					(					,		ls:sh
INA	169.50	192.50	3.00	-	-	-	-	-	-	-	-	-	-	-	15.511
					CORE	NO. 33	192.50 - 195.5	0 (CUT/REC	EIVED = 3.	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	192.50	195.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 34	195.50 - 198.5	0 (CUT/REC	EIVED = 3.	00 / 3.00 m	TOTA	L BOXES	S = 2)		
NA	195.50	198.50	3.00	_	_	_	_	· -	_	_	_	_	_	_	ls:sh
177	100.00	100.00	0.00												10.511
					CORE	NO. 35	198.50 - 201.	0 (CUT/REC	EIVED = 2.	60 / 2.60 m	1017	IL BOXES	5 = 2)		
NA	198.50	201.10	2.60	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 36	201.10 - 202.0	00 (CUT/REC	EIVED = 0.	90 / 0.90 m	TOTA	L BOXES	S = 1)		
NA	201.10	202.00	0.90	_	_	_	_	_	_	_	_	_	_	_	ls:sh
					CORE	NO 27	202.00 204	'0 (CUT/DEC	EIVED - 2	70 / 2 70 ~	TOT /		. – 2)		
					CORE	NO. 37	202.00 - 204.7	'0 (CUT/REC	⊏IVED = 2.	10 / 2.70 M	1017	L BOXES	o = 2)		
NA	202.00	204.70	2.70	-	-	-	-	-	-	-	-	-	-	-	ls:sh

FORMATION : SHELL LAKE MEMBER/KEG RIVER WELL NAME : SLINCOR OR LEWIS

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		erval n)	Rep Thick	Sample Length	Ga Kmax	as Permeability K90	Kv	Capacity Kmax		Capacity		nsity g/m³)		idual ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø·m		Grain			Remarks
					CORE	NO 38 204	70 207 70	(CUT/RECE	IVED = 3 (	00 / 3 00 m	TOTA	I BOVES	: - 2)	•	
NA	204.70	207.70	3.00	_	-	-	-	-	- 3.0 -	-	-	-	-	_	ls:sh
					CORE	NO. 39 207.	70 - 210.70	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	207.70	210.70	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 40 210.	70 - 213.70	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	210.70	213.70	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 41 213.	70 - 216.70	( CUT / RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	213.70	216.70	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 42 216.	70 - 219.70	( CUT / RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	216.70	219.70	3.00	-	-	-	-	-	-	-	-	-	-		ls:sh
					CORE	NO. 43 219.	70 - 221.00	(CUT/RECE	IVED = 1.3	30 / 1.30 m	TOTA	L BOXES	5 = 1)		
NA	219.70	221.00	1.30	-	-	- NO 44 004	-	- / OUT / DEGE	-	-	-	-	-	-	ls:sh
NA	221.00	224.00	3 00	_	CORE	NO. 44 221.	00 - 224.00	(CUT/RECE	IVED = 3.0	JU / 3.UU M	1014	IL BUXES	5 = 2)		ls:sh
INA	221.00	224.00	3.00	-	CORF	NO 45 224	- 00 - 227.00	- ( CUT / RECE	- IVFD = 30	- 00 / 3 00 m	- TOTA	- J BOXES	-	-	13.311
NA	224.00	227.00	3.00	_	-	-	-	-	-	-	-	-	- <del>-</del> )	_	ls:sh
					CORE	NO. 46 227.	00 - 229.00	( CUT / RECE	IVED = 2.0	00 / 2.00 m	TOTA	L BOXES	5 = 2)		

FORMATION : SHELL LAKE MEMBE WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

: SHELL LAKE MEMBER/KEG RIVER

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	Inte (r	erval	Rep Thick	Sample Length	Ga Kmax	s Permeabil	ity	Capacity Kmax		Capacity		nsity /m³)	Resi Satu		
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø·m	` ;	Grain			Remarks
NA	227.00	229.00	2.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 47 22	29.00 - 232.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	229.00	232.00	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 48 23	32.00 - 235.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	232.00	235.00	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 49 23	35.00 - 238.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	235.00	238.00	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 50 23	88.00 - 241.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	238.00	241.00	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 51 24	1.00 - 244.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	241.00	244.00	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 52 24	4.00 - 247.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	244.00	247.00	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 53 24	7.00 - 249.50	(CUT/RECE	IVED = 2.5	50 / 2.50 m	TOTA	L BOXES	= 2)		
NA	247.00	249.50	2.50	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 54 24	9.50 - 252.50	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	249.50	252.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh

FORMATION : SHELL LAKE MEMBER/KEG RIVER WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

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		rval	Rep	Sample		s Permeability		Capacity				nsity		idual	
_	,	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity		g/m³)		ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø·m	Bulk	Grain	Oil	Water	Remarks
					CORE	NO. 55 252	2.50 - 255.40	(CUT/RECE	IVED = 2.9	90 / 2.90 m	TOTA	L BOXES	5 = 2)		
NA	252.50	255.40	2.90	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 56 255	5.40 - 258.00	(CUT/RECE	IVED = 2.6	60 / 2.60 m	TOTA	L BOXES	5 = 2)		
NA	255.40	258.00	2.60	-	-	-	-	-	-	-	_	_	_	_	ls:sh
					CORF	NO 57 258	3.00 - 261.00	(CUT/RECE	IVFD = 30	00 / 2 80 m	TOTA	I BOXES	S = 2 )		
A.I.A	050.00	000.00	0.00		OOKL	110. 07 200	201.00	( OO! / INLOE		70 / 2.00 III	.017	L DONLO	, _,		1 1
NA LC	258.00 260.80	260.80 261.00	2.80 0.20	-	-	-	-	-	-	-	-	-	-	-	ls:sh Lost Core
					CORE	NO. 58 261	.00 - 263.70	( CUT / RECE	IVED = 2.7	70 / 2.70 m	TOTA	L BOXES	5 = 2)		
NA	261.00	263.70	2 70	_	_			_	<del></del>		_	_	- /	_	ls:sh
INA	201.00	203.70	2.10	-	-		-		-	-				-	13.311
					CORE	NO. 59 263	3.70 - 265.80	( CUT / RECE	IVED = 2.1	10 / 2.10 m	TOTA	L BOXES	5 = 2)		
NA	263.70	265.80	2.10	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 60 265	5.80 - 268.50	(CUT/RECE	IVED = 2.7	70 / 1.85 m	TOTA	L BOXES	5 = 2)		
NA	265.80	267.65	1.85	-	-	-	-	-	-	-	-	-	-	-	ls:sh
LC	267.65	268.50	0.85	-	-	-	-	-	-	-	-	-	-	-	Lost Core
					CORE	NO. 61 268	3.50 - 271.50	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	268.50	271.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 62 271	.50 - 274.50	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	s = 2		

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	Inte	erval	Rep	Sample	Ga	s Permeabilit	у	Capacity			De	nsity	Res	idual	
	`	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity		g/m³)		ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø⋅m	Bulk	Grain	Oil	Water	Remarks
NA	271.50	274.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 63 274	.50 - 277.50	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	274.50	277.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 64 277	7.50 - 280.50	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	277.50	280.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 65 280	.50 - 283.50	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	280.50	283.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 66 283	3.50 - 286.50	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	283.50	286.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 67 286	5.50 - 289.50	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	286.50	289.50	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 68 289	.50 - 292.80	(CUT/RECE	IVED = 3.3	30 / 3.30 m	TOTA	L BOXES	3 = 3)		
NA	289.50	292.80	3.30	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 69 292	2.80 - 295.80	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	5 = 2)		
NA	292.80	295.80	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 70 295	5.80 - 299.00	(CUT/RECE	IVED = 3.2	20 / 3.20 m	TOTA	L BOXES	3 = 3)		
NA	295.80	299.00	3.20	-	-	-	-	-	-	-	-	-	-	-	ls:sh

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

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	Inte	erval	Rep	Sample	Ga	s Permeability	/	Capacity			De	nsity	Resi	idual	
	·	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	` ;	/m³)		ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø⋅m	Bulk	Grain	Oil	Water	Remarks
					CORE	NO. 71 299	.00 - 302.00	(CUT/RECE	EIVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	299.00	302.00	3.00	-	-	-	-	-	-	-	-	-	-	-	ls:sh
					CORE	NO. 72 302	.00 - 304.50	(CUT/RECE	EIVED = 2.5	50 / 1.50 m	TOTA	L BOXES	= 1)		
NA	302.00	303.50	1.50	-	-	-	-	-	-	-	-	-	-	-	ls:sh
LC	303.50	304.50	1.00	-	-	-	-	-	-	-	-	-	-	-	Lost Core
					CORE	NO. 73 304	.50 - 307.00	(CUT/RECE	EIVED = 2.5	50 / 2.50 m	TOTA	L BOXES	= 2)		
NA	304.50	307.00	2.50	-	-	-	-	-	-	-	-	-	-	-	ls:dol:sh
					CORE	NO. 74 307	.00 - 310.00	(CUT/RECE	EIVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	307.00	310.00	3.00	-	-	-	-	-	-	-	-	-	-	-	sh:dol
					CORE	NO. 75 310	.00 - 313.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	310.00	313.00	3.00	-	-	-	-	-	-	-	-	-	-	-	sh:dol
					CORE	NO. 76 313	.00 - 316.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	L BOXES	= 2)		
NA	313.00	316.00	3.00	-	-	-	-	-	-	-	-	-	-	-	sh:dol
					CORE	NO. 77 316	.00 - 319.00	(CUT/RECE	EIVED = 3.0	00 / 2.80 m	TOTA	L BOXES	= 2)		
NA LC	316.00 318.80	318.80 319.00	2.80 0.20	-	-	-	-	-	-	-	-	-	-	-	sh:dol Lost Core
LC	310.00	319.00	0.20	-	-	-	-	-	-	-	-	-	-	-	LUST COTE
					CORE	NO. 78 319	.00 - 321.50	(CUT/RECE	EIVED = 2.5	50 / 1.70 m	TOTA	L BOXES	= 2)		

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# **ROUTINE CORE ANALYSIS**

	Inte	rval	Rep	Sample		as Permeabili	<del>,</del>	Capacity			l	ensity	Res	idual	
	(r	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	(Ko	g/m³)	Satu	ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø·m	Bulk	Grain	Oil	Water	Remarks
NA LC	319.00 320.70	320.70 321.50	1.70 0.80	-	-	-	-	-	-	-	-	-	-	-	sh:dol Lost Core
					CORE	E NO. 79 32	1.50 - 324.00	(CUT/RECE	IVED = 2.5	50 / 2.50 m	TOTA	AL BOXES	8 = 2)		
NA	321.50	324.00	2.50	-	-	-	-	-	-	-	-	-	-	-	sh:dol:anhy
					CORE	E NO. 80 32	4.00 - 326.85	(CUT/RECE	IVED = 2.8	35 / 2.85 m	TOTA	AL BOXES	8 = 2)		
NA	324.00	326.85	2.85	-	-	-	-	-	-	-	-	-	-	-	sh:anhy:dol
					CORE	E NO. 81 32	6.85 - 328.00	(CUT/RECE	IVED = 1.1	15 / 1.15 m	TOTA	AL BOXES	S = 1)		
NA	326.85	328.00	1.15	-	-	-	-	-	-	-	-	-	-	-	anhy:ls:sh
					CORE	E NO. 82 32	8.00 - 331.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	AL BOXES	8 = 2)		
NA	328.00 328.61	328.61 329.51	0.61 0.90	-	-	-	-	-	-	-	-	-	-	-	anhy:ls:sh
003 004	329.51	330.00	0.90	0.07	0.40	0.39	0.08	0.20	0.127	0.062	2350	2690	-	-	ls:Broken Sample ls:vfxln:ppvugs:arg:lam:fracs
005	330.00	331.00	1.00	0.09	0.81	0.05	0.08 *	0.81	0.018	0.018	2640	2690	-	-	ls:vfxln:scatvugs:arg:lam:styl:fracs
					CORE	E NO. 83 33	1.00 - 334.00	(CUT/RECE	IVED = 3.0	00 / 3.00 m	TOTA	AL BOXES	8 = 2)		
006 007	331.00 331.60	331.60 332.13	0.60 0.53	0.09 0.09	0.09 0.03	0.08 0.03	0.03 0.01	0.05 0.02	0.064 0.026	0.038 0.014	2510 2620	2690 2690	-	-	ls:vfxln:arg:lam:styl:fracs ls:vfxln:arg:lam:styl:fracs
800	332.13	332.67	0.54	0.10	0.11	0.11	0.02	0.06	0.044	0.024	2580	2700	-	-	ls:vfxln:arg:lam:styl:fracs



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

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# **ROUTINE CORE ANALYSIS**

	Inte	erval	Rep	Sample	G	as Permeabili	<del>,</del>	Capacity			De	nsity	Res	idual	
	(r	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	(K	g/m³)	Satu	ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø·m	Bulk	Grain	Oil	Water	Remarks
NA 009	332.67 333.52	333.52 334.00	0.85 0.48	- 0.09	- 3.96	2.73	2.54	- 1.90	- 0.061	0.029	- 2650	- 2820	-	-	ls:sh dol:vfxln:ppvugs:styl:calc:fracs
					CORE	NO. 84 33	4.00 - 336.00	(CUT/RECE	EIVED = 2.0	00 / 2.00 m	TOTA	AL BOXES	5 = 2)		
010	334.00	335.64	1.64	0.08	7.57	3.93	6.63 *	12.4	0.057	0.093	2660	2820	-	-	dol:vfxln:ppvugs:styl:calc:pyr:frac
SP011	335.64	336.00	0.36	-	0.01	-	-	0.00	0.047	0.017	2720	2850	-	-	dol:vfxln:ppvugs:calc:pyr
					CORE	NO. 85 33	6.00 - 337.50	(CUT/RECE	EIVED = 1.5	50 / 1.50 m	TOTA	AL BOXES	5 = 1)		
012 NA	336.00 336.97	336.97 337.50	0.97 0.53	0.09	18.2 -	4.51 -	25.9 * -	17.7 -	0.077	0.075 -	2550 -	2760 -	-	-	ls:vfxln:vugs:styl:dol:fracs dol
					CORE	NO. 86 33	7.50 - 340.50	(CUT/RECE	EIVED = 3.0	00 / 2.80 m	TOTA	AL BOXES	5 = 2)		
NA 013 LC	337.50 339.25 340.30	339.25 340.30 340.50	1.75 1.05 0.20	- 0.08 -	0.09	- 0.04 -	1.94 * -	0.09	- 0.051 -	- 0.054 -	- 2680 -	- 2820 -	- - -	- - -	dol dol:vfxln:ppvugs:calc:fracs Lost Core
					CORE	NO. 87 34	0.50 - 343.20	(CUT/RECE	EIVED = 2.7	70 / 2.70 m	TOTA	AL BOXES	5 = 2)		
014 015 NA	340.50 341.67 342.08	341.67 342.08 342.33	1.17 0.41 0.25	0.07 0.09 -	5.70 1.91 -	3.26 1.23 -	0.38 0.14 -	6.67 0.78	0.067 0.087 -	0.078 0.036 -	2620 2570 -	2810 2810 -	- - -	- - -	dol:vfxln:ppvugs:styl:calc:fracs dol:vfxln:ppvugs:styl:calc:fracs dol:ls:sh
SP016	342.33	343.20	0.87	-	0.07	-	-	0.06	0.047	0.041	2680	2810	-	-	dol:vfxln:ppvugs:calc:fracs



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

FORMATION : SHELL LAKE MEMBER/KEG RIVER
WELL NAME : SUNCOR OB LEWIS
DRILLING FLUID : WATER BASE MUD

# **ROUTINE CORE ANALYSIS**

	Inte	rval	Rep	Sample	G	as Permeabil	lity	Capacity			De	nsity	Re	sidual	
	(r	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	(K	g/m³)	Satı	uration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø·m	Bulk	Grain	Oil	Water	Remarks
					CORE	E NO. 88 34	13.20 - 346.00	(CUT/RECE	EIVED = 2.8	30 / 2.30 m	TOT	AL BOXES	S = 2)		
SP017 018 SP019	343.20 343.93 344.06	343.93 344.06 344.20	0.73 0.13 0.14	0.06	0.27 4.86 0.01	1.32 -	- 5.91 * -	0.20 0.63 0.00	0.114 0.069 0.025	0.083 0.009 0.004	2520 2510 2650	2840 2700 2720	- - -	- - -	dol:vfxln:ppvug:lam:calc:pyr:fracs ls:vfxln:vugs:lam:styl:fracs ls:vfxln:ppvugs:pyr
SP020 021 LC	344.20 344.58 345.50	344.58 345.50 346.00	0.38 0.92 0.50	0.09 -	0.01 3.25 -	3.23 -	1.65 -	0.00 2.99 -	0.030 0.101 -	0.011 0.093 -	2640 2530 -	2720 2810 -	- - -	- - -	ls:vfxln:styl:pyr dol:vfxln:arg:lam:styl:calc:fracs Lost Core
					CORE	NO. 89 34	16.00 - 348.00	(CUT/RECE	EIVED = 2.0	00 / 1.90 m	TOTA	AL BOXES	8 = 2)		
022 023 024 LC	346.00 347.30 347.50 347.90	347.30 347.50 347.90 348.00	1.30 0.20 0.40 0.10	0.06 0.07 0.09	14.2 191. * 6.51	4.50 3.63 4.07	2.68 0.28 11.8 *	18.5 38.2 2.60	0.108 0.046 0.048	0.140 0.009 0.019	2500 2590 2580	2800 2710 2710 -	- - -	- - -	dol:vfxln:ppvug:arg:lam:calc:frac: ls:vfxln:vugs:arg:styl:fracs ls:vfxln:vugs:arg:styl:fracs Lost Core
					CORE	NO. 90 34	18.00 - 349.00	(CUT/RECE	EIVED = 1.0	00 / 0.60 m	TOTA	AL BOXES	S = 1)		
SP025 LC	348.00 348.60	348.60 349.00	0.60 0.40	-	0.01	-	-	0.01	0.032	0.019 -	2620 -	2710 -	-	-	ls:vfxln:ppvugs:arg:styl:fracs Lost Core
					CORE	NO. 91 34	19.00 - 349.20	(CUT/RECE	EIVED = 0.2	20 / 0.20 m	TOTA	AL BOXES	S = 1)		
NA	349.00	349.20	0.20	-	-	-	-	-	-	-	-	-	-	-	Is
					CORE	NO. 92 34	19.20 - 350.00	(CUT/RECE	EIVED = 0.8	30 / 0.80 m	TOTA	AL BOXES	S = 1)		
026	349.20	350.00	0.80	0.07	20.2 *	0.07	0.11 *	16.2	0.027	0.022	2610	2690	-	-	ls:vfxln:arg:lam:styl:fracs



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

# **ROUTINE CORE ANALYSIS**

	Inte		Rep	Sample		s Permeability	1	Capacity				nsity		idual	
	(n		Thick	Length	Kmax	K90	Kv	Kmax		Capacity		g/m³)		ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø·m	Bulk	Grain	Oil	Water	Remarks
			1								lI			-	
					CORE	NO. 93 350.	00 - 352.00	(CUT/RECE	IVED = 2.0	0 / 0.90 m	TOTA	L BOXES	= 1)		
SP027	350.00	350.90	0.90	-	0.10	-	-	0.09	0.050	0.045	2570	2710	-	-	ls:vfxln:ppvugs:arg:styl:fracs
LC	350.90	352.00	1.10	-	-	-	-	-	-	-	-	-	-	-	Lost Core
					CORE	NO. 94 352.	00 - 354.00	(CUT/RECE	IVED = 2.0	0 / 1.60 m	TOTA	L BOXES	= 2)		
028	352.00	352.32	0.32	-	_	-	-	-	-	-	-	-	-	-	ls:Broken Sample
029	352.32	353.01	0.69	0.04	30.5	29.0	5.86	21.0	0.154	0.106	2320	2740	-	-	ls:vfxln:vugs:dol:fracs
030	353.01	353.60	0.59	-	-	-	-	-	-	-	-	-	-	-	ls:Broken Sample
LC	353.60	354.00	0.40	-	-	-	-	-	-	-	-	-	-	-	Lost Core
					CORE	NO. 95 354.	00 - 357.00	(CUT/RECE	IVED = 3.0	0 / 3.00 m	TOTA	L BOXES	= 2)		
031	354.00	354.79	0.79	0.06	7.17	6.94	1.45	5.66	0.129	0.102	2470	2840	_	-	dol:vfxln:ppvugs:arg:styl:fracs
SP032	354.79	354.95	0.16	-	1.36	-	-	0.22	0.150	0.024	2410	2840	-	-	dol:vfxln:ppvugs:arg:lam:styl
033	354.95	355.20	0.25	0.09	17.2	16.9	11.6	4.30	0.185	0.046	2300	2830	-	-	dol:vfxln:ppvugs:arg:styl
034	355.20	356.64	1.44	0.08	14.6	11.9	8.74	21.0	0.160	0.230	2370	2820	-	-	dol:vfxln:ppvugs:arg:styl:calc
035	356.64	357.00	0.36	0.07	5.77	4.88	3.13	2.08	0.157	0.057	2390	2840	-	-	dol:vfxln:ppvugs:arg:styl:fracs
					CORE	NO. 96 357.	00 - 357.70	(CUT/RECE	IVED = 0.7	0 / 0.70 m	TOTA	L BOXES	= 1)		
036	357.00	357.70	0.70	0.09	11.7	11.0	10.8	8.19	0.144	0.101	2430	2830	-	-	dol:vfxln:vugs:arg:fracs
					CORE	NO. 97 357.	70 - 360.00	(CUT/RECE	IVED = 2.3	0 / 2.30 m	TOTA	L BOXES	= 2)		
037	357.70	358.46	0.76	0.09	23.0	18.1	8.93	17.5	0.207	0.157	2250	2830	_	_	dol:vfxln:vuqs:arq:styl:calc:fracs
038	358.46	359.13	0.67	0.08	630. *	72.1	1110. *	422.	0.206	0.138	2230	2800	-	-	dol:vfxln:vugs:arg:styl:calc:fracs



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

FORMATION : SHELL LAKE MEMBER/KEG RIVER
WELL NAME : SUNCOR OB LEWIS
DRILLING FLUID : WATER BASE MUD

# **ROUTINE CORE ANALYSIS**

	Inte	rval	Rep	Sample	Ga	as Permeabili	ty	Capacity			De	nsity	Res	sidual	
	(r	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	(Ko	g/m³)	Satu	uration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø·m	Bulk	Grain	Oil	Water	Remarks
039	359.13	360.00	0.87	0.10	19.4	19.4	16.2	16.9	0.144	0.125	2430	2830	-	-	dol:vfxln:vugs:arg:styl:calc:fracs
					CORE	NO. 98 36	0.00 - 362.10	(CUT/RECE	IVED = 2.1	10 / 0.80 m	TOTA	AL BOXES	S = 1)		
NA LC	360.00 360.80	360.80 362.10	0.80 1.30	-	-	-	-	-	-	-	-	-	-	-	dol:sh Lost Core
	333.33	0020													200, 00.0
					CORE	NO. 99 36	2.10 - 364.00	(CUT/RECE	EIVED = 1.9	90 / 1.90 m	TOTA	AL BOXES	8 = 2)		
040 041	362.10 362.55	362.55 363.34	0.45 0.79	0.10 0.08	42.4 6.26	4.46 0.26	8.11 * 0.15	19.1 4.95	0.115 0.084	0.052 0.066	2500 2590	2820 2830	-	-	dol:vfxln:ppvug:arg:styl:calc:fracs
042	363.34	364.00	0.79	0.08	104.	100.	55.2	68.6	0.064	0.130	2260	2820	-	-	dol:vfxln:ppvug:carbptg:calc:fracs dol:vfxln:vugs:arg:styl:calc:fracs
					CORE	NO. 100 3	64.00 - 364.30	(CUT/REC	EIVED = 0	.30 / 0.30 m	тот	AL BOXE	:S = 1	)	
SP043	364.00	364.30	0.30	-	4.96	-	-	1.49	0.087	0.026	2600	2840	-	-	dol:vfxln:ppvugs:arg:styl:fracs
					CORE	NO. 101 3	64.30 - 367.00	(CUT/REC	EIVED = 2	.70 / 2.70 m	тот	AL BOXE	S = 2	)	
044	364.30	365.03	0.73	0.10	0.14	0.13	0.08	0.10	0.068	0.050	2640	2840	-	-	dol:vfxln:ppvugs:arg:styl:fracs
045 046	365.03 365.28	365.28 365.72	0.25 0.44	0.06 0.06	5.11 0.20	4.91 0.13	4.06 0.07	1.28 0.09	0.094 0.087	0.024 0.038	2550 2570	2820 2820	-	-	dol:vfxln:vugs:arg:styl:calc:fracs dol:vfxln:vugs:arg:styl:calc:fracs
047	365.72	366.28	0.56	0.06	1.42	1.33	0.73	0.80	0.007	0.030	2450	2820	_	-	dol:vfxln:vugs:arg:styl:calc:racs
048	366.28	367.00	0.72	0.08	3.14	1.53	0.25	2.26	0.085	0.061	2590	2820	-	-	dol:vfxln:vugs:arg:styl:calc:fracs
					CORE	NO. 102 3	67.00 - 370.00	(CUT/REC	EIVED = 3	.00 / 3.00 m	тот	AL BOXE	S = 2	)	
049	367.00	367.77	0.77	0.10	0.32	0.24	0.11	0.25	0.063	0.049	2650	2820	-	-	dol:vfxln:ppvugs:arg:styl:fracs



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

## **ROUTINE CORE ANALYSIS**

	Inte	erval	Rep	Sample	(	Gas Permeability		Capacity			De	nsity	Res	idual	
	(r	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	(Kg	g/m³)	Satu	ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø⋅m	Bulk	Grain	Oil	Water	Remarks
050	367.77	368.50	0.73	0.08	30.2	7.82	0.25	22.0	0.084	0.061	2580	2820	-	_	dol:vfxln:vugs:arg:styl:calc:fracs
051	368.50	369.28	0.78	0.09	6.35	5.77	0.68	4.95	0.139	0.108	2420	2810	-	-	dol:vfxln:vugs:arg:styl:calc:fracs
052	369.28	370.00	0.72	0.06	0.26	0.22	0.15	0.19	0.083	0.060	2600	2830	-	-	dol:vfxln:vugs:arg:styl:fracs
					COR	E NO. 103 37	0.00 - 371.00	(CUT/REC	EIVED = 1	.00 / 0.90 m	тот	AL BOXE	S = 1	)	
053	370.00	370.90	0.90	0.09	1.24	0.93	0.29	1.12	0.106	0.095	2520	2820	-	-	dol:vfxln:ppvugs:arg:styl:fracs
LC	370.90	371.00	0.10	-	-	-	-	-	-	-	-	-	-	-	Lost Core
					COR	E NO. 104 37	1.00 - 374.00	(CUT/REC	EIVED = 3	.00 / 3.00 m	тот	AL BOXE	S = 2	)	
054	371.00	371.26	0.26	0.08	3.40	2.97	0.50	0.88	0.120	0.031	2480	2820	_	_	dol:vfxln:ppvugs:arg:styl:fracs
055	371.26	371.89	0.63	0.09	9.20	8.09	4.46	5.80	0.149	0.094	2400	2830	-	-	dol:vfxln:ppvugs:arg:styl:fracs
056	371.89	372.42	0.53	0.10	4.17	4.12	1.90	2.21	0.143	0.076	2400	2810	_	_	dol:vfxln:ppvugs:arg:styl:fracs
057	372.42	372.77	0.35	0.09	2.70	2.52	0.47	0.95	0.135	0.047	2430	2810	-	-	dol:vfxln:ppvugs:arg:styl:fracs
NA	372.77	373.18	0.41	-	-	-	-	-	-	-	-	-	-	-	dol
058	373.18	374.00	0.82	0.10	3.18	1.71	0.09	2.61	0.103	0.084	2530	2820	-	-	dol:vfxln:vugs:arg:styl:fracs
					COR	E NO. 105 37	4.00 - 377.00	(CUT/REC	EIVED = 3	.00 / 3.00 m	тот	AL BOXE	S = 2	)	
NA	374.00	374.54	0.54	_	-	-	-	-	_	_	_	_	_	-	dol
059	374.54	375.50	0.96	0.09	7.12	5.56	4.16	6.84	0.120	0.115	2470	2810	-	-	dol:vfxln:ppvugs:arg:styl:fracs
060	375.50	376.25	0.75	0.08	9.49	8.31	1.33	7.12	0.168	0.126	2340	2810	-	-	dol:vfxln:ppvugs:arg:styl:pyr:fracs
061	376.25	377.00	0.75	0.09	15.6	12.8	2.05	11.7	0.160	0.120	2330	2780	-	-	dol:vfxln:ppvugs:arg:styl:cht:fracs
					COR	E NO. 106 37	7.00 - 380.00	(CUT/REC	EIVED = 3	.00 / 3.00 m	тот	AL BOXE	S = 2	)	
062	377.00	377.75	0.75	0.10	1.32	1.21	0.39	0.99	0.095	0.071	2560	2830	-	-	dol:vf-fxln:ppvug:arg:carbptg:frac

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FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

## **ROUTINE CORE ANALYSIS**

	Inte	erval	Rep	Sample	G	as Permeabil	ity	Capacity			De	nsity	Res	idual	
	1)	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	(Ko	g/m³)	Satu	ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø⋅m	Bulk	Grain	Oil	Water	Remarks
063 064	377.75 378.50	378.50 379.25	0.75 0.75	0.10 0.07	0.25 0.06	0.23 0.05	0.10 0.02	0.19	0.075 0.059	0.056 0.044	2610 2670	2820 2830	-	-	dol:vf-fxln:ppvugs:arg:carb:fracs
065	379.25	380.00	0.75	0.07	0.03	0.03	0.02	0.05 0.02	0.063	0.044	2640	2820	-	-	dol:vf-fxln:ppvugs:arg:fracs dol:vfxln:ppvugs:arg:lam:carbptg
					CORE	NO. 107 3	80.00 - 382.00	(CUT/REC	EIVED = 2	.00 / 2.00 m	тот	AL BOXE	S = 2	)	
066 067	380.00 380.44	380.44 382.00	0.44 1.56	0.09 0.09	3.39 12.8	2.43 9.59	0.04 1.71	1.49 20.0	0.087 0.203	0.038 0.317	2580 2190	2830 2740	-	-	dol:vfxln:ppvugs:arg:lam:styl:fracsdol:vfxln:ppvug:arg:carb:cht:fracs
007	300.44	302.00	1.00	0.00			82.00 - 385.00	( CUT / REC				AL BOXE	S = 2	)	doi.vixiii.ppvug.arg.carb.ciii.iiacs
068	382.00	383.39	1.39	0.09	10.3	9.57	2.78	14.3	0.173	0.240	2300	2780		,	dol:vfxln:ppvug:arg:carb:cht:fracs
069	383.39	385.00	1.61	0.09	2.35	2.11	0.19	3.78	0.173	0.222	2400	2790	-	-	dol:vfxln:ppvug:arg:carb:cht:fracs
					CORE	: NO. 109 3	85.00 - 388.00	(CUT/REC	EIVED = 3	.00 / 3.00 m	тот	AL BOXE	S = 2	)	
NA	385.00	388.00	3.00	-	-	-	-	-	-	-	-	-	-	-	dol:sh
					CORE	NO. 110 3	88.00 - 390.60	(CUT/REC	EIVED = 2	.60 / 2.60 m	тот	AL BOXE	S = 2	)	
070	388.00	390.60	2.60	0.09	0.05	0.03	0.01	0.13	0.083	0.216	2590	2820	-	-	dol:vfxln:ppvugs:arg:carbptg
					CORE	NO. 111 3	90.60 - 393.50	(CUT/REC	EIVED = 2	.90 / 2.90 m	тот	AL BOXE	S = 2	)	
NA	390.60	393.50	2.90	-	-	-	-	-	-	-	-	-	-	-	dol:anhy:gyp:sh
					CORE	NO. 112 3	93.50 - 396.40	(CUT/REC	EIVED = 2	.90 / 2.90 m	тот	AL BOXE	S = 2	)	
NA	393.50	396.40	2.90	-	-	-	-	-	-	-	-	-	-	-	dol:sh:anhy:gyp
					CORE	NO. 113 3	96.40 - 399.40	(CUT/REC	EIVED = 3	.00 / 3.00 m	тот	AL BOXE	S = 2	)	



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: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

FORMATION : SHELL LAKE MEMBER/KEG RIVER
WELL NAME : SUNCOR OB LEWIS
DRILLING FLUID : WATER BASE MUD

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	Inte	rval	Rep	Sample		as Permeab		Capacity				nsity		idual	
	(r	,	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	(Kg			ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø⋅m	Bulk	Grain	Oil	Water	Remarks
NA	396.40	399.40	3.00	-	-	-	-	-	-	-	-	-	-	-	dol:sh:anhy:gyp
					CORE	NO. 114	399.40 - 402.40	(CUT/REC	EIVED = 3	.00 / 3.00 m	TOT	AL BOXE	S = 2)		
NA	399.40	402.40	3.00	-	-	-	-	-	-	-	-	-	-	-	dol:sh:anhy:gyp
					CORE	NO. 115	402.40 - 405.40	(CUT/REC	EIVED = 3	.00 / 3.00 m	TOT	AL BOXE	S = 2)		
NA	402.40	405.40	3.00	-	-	-	-	-	-	-	-	-	-	-	dol:sh:anhy:gyp
					CORE	NO. 116	405.40 - 407.80	(CUT/REC	EIVED = 2	40 / 2.40 m	TOT	AL BOXE	S = 2)		
NA	405.40	407.80	2.40	-	-	-	-	-	-	-	-	-	-	-	dol:sh:anhy:gyp
					CORE	NO. 117	407.80 - 410.10	(CUT/REC	EIVED = 2	.30 / 2.30 m	TOT	AL BOXE	S = 2)	ı	
NA	407.80	410.10	2.30	-	-	-	-	-	-	-	-	-	-	-	dol:sh:anhy:gyp
					CORE	NO. 118	410.10 - 412.80	(CUT/REC	EIVED = 2	.70 / 2.70 m	TOT	AL BOXE	S = 2)	ı	
NA	410.10	412.80	2.70	-	-	-	-	-	-	-	-	-	-	-	sh:dol:anhy:gyp
					CORE	NO. 119	412.80 - 415.50	(CUT/REC	EIVED = 2	.70 / 2.70 m	TOT	AL BOXE	S = 2)		
NA	412.80	415.50	2.70	-	-	-	-	-	-	-	-	-	-	-	sh:dol:anhy:gyp
					CORE	NO. 120	415.50 - 418.00	(CUT/REC	EIVED = 2	50 / 2.50 m	TOT	AL BOXE	S = 2)	1	
NA	415.50	418.00	2.50	-	-	-	-	-	-	-	-	-	-	-	sh:ss:anhy:gyp
					CORE	NO. 121	418.00 - 420.50	(CUT/REC	EIVED = 2	.50 / 2.30 m	TOT	AL BOXE	S = 2)	ı	
NA	418.00	418.95	0.95	-	-	-	-	-	-	-	-	-	-	-	sh:ss:anhy:gyp

FORMATION : SHELL LAKE MEMBER/KEG RIVER

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## **ROUTINE CORE ANALYSIS**

	Inte	rval	Rep	Sample	Ga	s Permeability	· _	Capacity			De	nsity	Res	idual	
	(r	n)	Thick	Length	Kmax	K90	Kv	Kmax		Capacity	(K(	g/m³)	Satu	ration	
Sample	Тор	Base	(m)	(m)	(mD)	(mD)	(mD)	mD·m	Porosity	Ø⋅m	Bulk	Grain	Oil	Water	Remarks
SP071	418.95	419.10	0.15	_	5.91	-	-	0.89	0.118	0.018	2370	2690	_	_	ss:vf-cgr:arg:dol:fracs
NA	419.10	420.30	1.20	-	-	-	-	-	-	-	-	-	-	-	sh:ss:anhy:gyp
LC	420.30	420.50	0.20	-	-	-	-	-	-	-	-	-	-	-	Lost Core
					CORE	NO. 122 420	0.50 - 422.60	(CUT/REC	EIVED = 2	2.10 / 2.10 m	ТОТ	AL BOXE	S = 2)	)	
NA	420.50	422.60	2.10	-	-	-	-	-	-	-	-	-	-	-	sh:ss:anhy:gyp
					CORE	NO. 123 42	2.60 - 425.00	(CUT/REC	EIVED = 2	2.40 / 2.40 m	тот	AL BOXE	S = 2)	)	
NA	422.60	425.00	2.40	_	-	_	-	-	-	_	_	-	_	_	sh:ss:anhy:gyp

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		CORE NO. 30 183.50 - 186.50	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)
001 002	183.50 - 184.67 184.67 - 186.50			
		CORE NO. 31 186.50 - 189.50	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	186.50 - 189.50			
		CORE NO. 32 189.50 - 192.50	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	189.50 - 192.50			
		CORE NO. 33 192.50 - 195.50	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)
NA	192.50 - 195.50			
		CORE NO. 34 195.50 - 198.50	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)

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NA	195.50 - 198.50			
		CORE NO. 35 198.50 - 201.10	(CUT/RECEIVED = 2.60/2.60 m	TOTAL BOXES = 2)
NA	198.50 - 201.10			
		CORE NO. 36 201.10 - 202.00	(CUT/RECEIVED = 0.90/0.90 m	TOTAL BOXES = 1)
NA	201.10 - 202.00			
		CORE NO. 37 202.00 - 204.70	(CUT/RECEIVED = 2.70/2.70 m	TOTAL BOXES = 2)
NA	202.00 - 204.70			
		CORE NO. 38 204.70 - 207.70	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	204.70 - 207.70			
		CORE NO. 39 207.70 - 210.70	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)

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NA	207.70 - 210.70			
		CORE NO. 40 210.70 - 213.70	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	210.70 - 213.70			
		CORE NO. 41 213.70 - 216.70	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	213.70 - 216.70			
		CORE NO. 42 216.70 - 219.70	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	216.70 - 219.70			
		CORE NO. 43 219.70 - 221.00	(CUT/RECEIVED = 1.30/1.30 m	TOTAL BOXES = 1)
NA	219.70 - 221.00			
		CORE NO. 44 221.00 - 224.00	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)

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NA	221.00 - 224.00			
		CORE NO. 45 224.00 - 227.00	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	224.00 - 227.00			
		CORE NO. 46 227.00 - 229.00	( CUT / RECEIVED = 2.00 / 2.00 m	TOTAL BOXES = 2)
NA	227.00 - 229.00			
		CORE NO. 47 229.00 - 232.00	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	229.00 - 232.00			
		CORE NO. 48 232.00 - 235.00	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	232.00 - 235.00			
		CORE NO. 49 235.00 - 238.00	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)

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NA	235.00 - 238.00			
		CORE NO. 50 238.00 - 241.00	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	238.00 - 241.00			
		CORE NO. 51 241.00 - 244.00	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	241.00 - 244.00			
		CORE NO. 52 244.00 - 247.00	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)
NA	244.00 - 247.00			
		CORE NO. 53 247.00 - 249.50	( CUT / RECEIVED = 2.50 / 2.50 m	TOTAL BOXES = 2)
NA	247.00 - 249.50			
		CORE NO. 54 249.50 - 252.50	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)

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NA	249.50 - 252.50			
		CORE NO. 55 252.50 - 255.40	(CUT/RECEIVED = 2.90/2.90 m	TOTAL BOXES = 2)
NA	252.50 - 255.40			
		CORE NO. 56 255.40 - 258.00	(CUT/RECEIVED = 2.60/2.60 m	TOTAL BOXES = 2)
NA	255.40 - 258.00			
		CORE NO. 57 258.00 - 261.00	(CUT/RECEIVED = 3.00/2.80 m	TOTAL BOXES = 2)
NA	258.00 - 260.80			
LC	260.80 - 261.00			
		CORE NO. 58 261.00 - 263.70	(CUT/RECEIVED = 2.70/2.70 m	TOTAL BOXES = 2)
NA	261.00 - 263.70			
		CORE NO. 59 263.70 - 265.80	( CUT / RECEIVED = 2.10 / 2.10 m	TOTAL BOXES = 2)

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NA	263.70 - 265.80			
		CORE NO. 60 265.80 - 268.50	(CUT/RECEIVED = 2.70/1.85 m	TOTAL BOXES = 2)
NA LC	265.80 - 267.65 267.65 - 268.50			
		CORE NO. 61 268.50 - 271.50	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	268.50 - 271.50			
		CORE NO. 62 271.50 - 274.50	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	271.50 - 274.50			
		CORE NO. 63 274.50 - 277.50	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	274.50 - 277.50			
		CORE NO. 64 277.50 - 280.50	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)

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NA	277.50 - 280.50			
		CORE NO. 65 280.50 - 283.50	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	280.50 - 283.50			
		CORE NO. 66 283.50 - 286.50	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)
NA	283.50 - 286.50			
		CORE NO. 67 286.50 - 289.50	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)
NA	286.50 - 289.50			
		CORE NO. 68 289.50 - 292.80	(CUT/RECEIVED = 3.30/3.30 m	TOTAL BOXES = 3)
NA	289.50 - 292.80			
		CORE NO. 69 292.80 - 295.80	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)

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NA	292.80 - 295.80			
		CORE NO. 70 295.80 - 299.00	(CUT/RECEIVED = 3.20/3.20 m	TOTAL BOXES = 3)
NA	295.80 - 299.00			
		CORE NO. 71 299.00 - 302.00	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	299.00 - 302.00			
		CORE NO. 72 302.00 - 304.50	(CUT/RECEIVED = 2.50/1.50 m	TOTAL BOXES = 1)
NA	302.00 - 303.50			
LC	303.50 - 304.50			
		CORE NO. 73 304.50 - 307.00	( CUT / RECEIVED = 2.50 / 2.50 m	TOTAL BOXES = 2)
NA	304.50 - 307.00			
		CORE NO. 74 307.00 - 310.00	( CUT / RECEIVED = 3.00 / 3.00 m	TOTAL BOXES = 2)

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NA	307.00 - 310.00			
		CORE NO. 75 310.00 - 313.00	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	310.00 - 313.00			
		CORE NO. 76 313.00 - 316.00	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	313.00 - 316.00			
		CORE NO. 77 316.00 - 319.00	(CUT/RECEIVED = 3.00/2.80 m	TOTAL BOXES = 2)
NA	316.00 - 318.80			
LC	318.80 - 319.00			
		CORE NO. 78 319.00 - 321.50	( CUT / RECEIVED = 2.50 / 1.70 m	TOTAL BOXES = 2)
NA	319.00 - 320.70			
LC	320.70 - 321.50			
		CORE NO. 79 321.50 - 324.00	(CUT/RECEIVED = 2.50/2.50 m	TOTAL BOXES = 2)

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#### **CORE ANALYSIS - QUALITY CONTROL REPORT**

NA 321.50 - 324.00

CORE NO. 80 324.00 - 326.85 (CUT/RECEIVED = 2.85/2.85 m TOTAL BOXES = 2)

NA 324.00 - 326.85

CORE NO. 81 326.85 - 328.00 (CUT/RECEIVED = 1.15/1.15 m TOTAL BOXES = 1)

NA 326.85 - 328.00

CORE NO. 82 328.00 - 331.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2)

NA 328.00 - 328.61 003 328.61 - 329.51 004 329.51 - 330.00

- KMax (0.40) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.88 - 31.8)
 - K90 (0.39) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.64 - 22.9)
 - Kv (0.08) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.32 - 11.6)
 results verified
 results verified

005 330.00 - 331.00

CORE NO. 83 331.00 - 334.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2)



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## **CORE ANALYSIS - QUALITY CONTROL REPORT**

006 331.00 - 331.60 007 331.60 - 332.13 008 332.13 - 332.67 NA 332.67 - 333.52 009 333.52 - 334.00

- KMax (3.96) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.03 - 1.19)
 - K90 (2.73) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.04 - 1.35)
 - Kv (2.54) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.01 - 0.45)
 horizontal fractures; results verified vertical fractures; results verified

CORE NO. 84 334.00 - 336.00 (CUT/RECEIVED = 2.00/2.00 m TOTAL BOXES = 2)

010 334.00 - 335.64

- KMax (7.57) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.03 - 0.98) horizontal fractures; results verified horizontal fractures; results verified horizontal fractures; results verified horizontal fractures; results verified

SP011 335.64 - 336.00

- KMax (0.01) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.02 - 0.59) results verified

CORE NO. 85 336.00 - 337.50 (CUT/RECEIVED = 1.50/1.50 m TOTAL BOXES = 1)

012 336.00 - 336.97

- KMax (18.2 ) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.07 - 2.64) horizontal fractures; results verified horizontal fractures; results verified horizontal fractures; results verified horizontal fractures; results verified

NA 336.97 - 337.50

CORE NO. 86 337.50 - 340.50 (CUT/RECEIVED = 3.00/2.80 m TOTAL BOXES = 2)



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#### **CORE ANALYSIS - QUALITY CONTROL REPORT**

NA 337.50 - 339.25 013 339.25 - 340.30 LC 340.30 - 340.50

CORE NO. 87 340.50 - 343.20 (CUT/RECEIVED = 2.70/2.70 m TOTAL BOXES = 2)

014 340.50 - 341.67

- KMax (5.70) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.04 - 1.61) horizontal fractures; results verified - K90 (3.26) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.05 - 1.75) horizontal fractures; results verified

015 341.67 - 342.08 NA 342.08 - 342.33 SP016 342.33 - 343.20

CORE NO. 88 343.20 - 346.00 (CUT/RECEIVED = 2.80/2.30 m TOTAL BOXES = 2)

SP017 343.20 - 343.93

- KMax (0.27) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.46 - 16.7) results verified

018 343.93 - 344.06

- KMax (4.86) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.05 - 1.77) horizontal

 SP019
 344.06 - 344.20

 SP020
 344.20 - 344.58

 021
 344.58 - 345.50

 LC
 345.50 - 346.00

horizontal fractures; results verified



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#### **CORE ANALYSIS - QUALITY CONTROL REPORT**

CORE NO. 89 346.00 - 348.00 (CUT/RECEIVED = 2.00/1.90 m TOTAL BOXES = 2)

horizontal fractures; results verified

022 346.00 - 347.30

- KMax (14.2 ) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.34 - 12.4)

023 347.30 - 347.50

- K90 (3.63) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.02 - 0.71)
 - Kv (0.28) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.01 - 0.21)
 horizontal fractures; results verified vertical fractures; results verified

024 347.50 - 347.90

- KMax (6.51) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.02 - 0.62) horizontal fractures; results verified horizontal fractures; results verified horizontal fractures; results verified horizontal fractures; results verified

LC 347.90 - 348.00

CORE NO. 90 348.00 - 349.00 (CUT/RECEIVED = 1.00/0.60 m TOTAL BOXES = 1)

SP025 348.00 - 348.60 LC 348.60 - 349.00

CORE NO. 91 349.00 - 349.20 (CUT/RECEIVED = 0.20/0.20 m TOTAL BOXES = 1)

NA 349.00 - 349.20

CORE NO. 92 349.20 - 350.00 (CUT/RECEIVED = 0.80/0.80 m TOTAL BOXES = 1)



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349.20 - 350.00

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CORE NO. 93 350.00 - 352.00 (CUT/RECEIVED = 2.00/0.90 m TOTAL BOXES = 1)

SP027 350.00 - 350.90 LC 350.90 - 352.00

026

CORE NO. 94 352.00 - 354.00 (CUT/RECEIVED = 2.00/1.60 m TOTAL BOXES = 2)

028 352.00 - 352.32 029 352.32 - 353.01 030 353.01 - 353.60 LC 353.60 - 354.00

CORE NO. 95 354.00 - 357.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2)

031 354.00 - 354.79 SP032 354.79 - 354.95

- KMax (1.36) IS OUTSIDE FOUR STANDARD DEVIATIONS (2.78 - 99.9) results verified

033 354.95 - 355.20 034 355.20 - 356.64 035 356.64 - 357.00

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#### **CORE ANALYSIS - QUALITY CONTROL REPORT**

CORE NO. 96 357.00 - 357.70 (CUT/RECEIVED = 0.70/0.70 m TOTAL BOXES = 1)

036 357.00 - 357.70

CORE NO. 97 357.70 - 360.00 (CUT/RECEIVED = 2.30/2.30 m TOTAL BOXES = 2)

037 357.70 - 358.46

- KMax (23.0 ) IS OUTSIDE FOUR STANDARD DEVIATIONS (47.3 - 1700)
 - K90 (18.1 ) IS OUTSIDE FOUR STANDARD DEVIATIONS (19.7 - 708)
 - Kv (8.93) IS OUTSIDE FOUR STANDARD DEVIATIONS (16.7 - 600)
 results verified
 results verified

038 358.46 - 359.13 039 359.13 - 360.00

CORE NO. 98 360.00 - 362.10 (CUT/RECEIVED = 2.10/0.80 m TOTAL BOXES = 1)

NA 360.00 - 360.80 LC 360.80 - 362.10

CORE NO. 99 362.10 - 364.00 (CUT/RECEIVED = 1.90/1.90 m TOTAL BOXES = 2)

040 362.10 - 362.55

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#### **CORE ANALYSIS - QUALITY CONTROL REPORT**

- KMax (42.4 ) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.49 - 17.5) horizontal fractures; results verified

041 362.55 - 363.34

- KMax (6.26) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.1 - 3.74) horizontal fractures; results verified

042 363.34 - 364.00

CORE NO. 100 364.00 - 364.30 (CUT/RECEIVED = 0.30/0.30 m TOTAL BOXES = 1)

SP043 364.00 - 364.30

- KMax (4.96) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.12 - 4.35) fractures; results verified

CORE NO. 101 364.30 - 367.00 (CUT/RECEIVED = 2.70/2.70 m TOTAL BOXES = 2)

044 364.30 - 365.03 045 365.03 - 365.28

- Kv (4.06) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.06 - 2.28) vertical fractures; results verified

046 365.28 - 365.72 047 365.72 - 366.28 048 366.28 - 367.00

CORE NO. 102 367.00 - 370.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2)

049 367.00 - 367.77 050 367.77 - 368.50



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#### **CORE ANALYSIS - QUALITY CONTROL REPORT**

horizontal fractures; results verified - KMax (30.2 ) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.1 - 3.74) - K90 (7.82) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.1 - 3.63) horizontal fractures; results verified 051 368.50 - 369.28 052 369.28 - 370.00 CORE NO. 103 370.00 - 371.00 (CUT/RECEIVED = 1.00/0.90 m TOTAL BOXES = 1) 053 370.00 - 370.90 LC 370.90 - 371.00 CORE NO. 104 371.00 - 374.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2) 054 371.00 - 371.26 055 371.26 - 371.89 056 371.89 - 372.42 057 372.42 - 372.77 - Kv (0.47) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.48 - 17.2) results verified NA 372.77 - 373.18 058 373.18 - 374.00 results verified - Kv (0.09) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.1 - 3.56) CORE NO. 105 374.00 - 377.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2) NA 374.00 - 374.54



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#### **CORE ANALYSIS - QUALITY CONTROL REPORT**

059 374.54 - 375.50 060 375.50 - 376.25

- Kv (1.33) IS OUTSIDE FOUR STANDARD DEVIATIONS (2.44 - 87.7) results verified

061 376.25 - 377.00

CORE NO. 106 377.00 - 380.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2)

 062
 377.00 - 377.75

 063
 377.75 - 378.50

 064
 378.50 - 379.25

 065
 379.25 - 380.00

- KMax (0.03) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.04 - 1.32) results verified results verified results verified results verified

CORE NO. 107 380.00 - 382.00 (CUT/RECEIVED = 2.00/2.00 m TOTAL BOXES = 2)

066 380.00 - 380.44 067 380.44 - 382.00

- KMax (12.8 ) IS OUTSIDE FOUR STANDARD DEVIATIONS (38.8 - 1400)
 - K90 (9.59) IS OUTSIDE FOUR STANDARD DEVIATIONS (16.6 - 597)
 - Kv (1.71) IS OUTSIDE FOUR STANDARD DEVIATIONS (13.7 - 493)

CORE NO. 108 382.00 - 385.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2)



FORMATION : SHELL LAKE MEMBER/KEG RIVER

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#### **CORE ANALYSIS - QUALITY CONTROL REPORT**

068 382.00 - 383.39

- Kv (2.78) IS OUTSIDE FOUR STANDARD DEVIATIONS (3.12 - 112) results verified

069 383.39 - 385.00

- Kv (0.19) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.55 - 20) laminae; results verified

CORE NO. 109 385.00 - 388.00 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2)

NA 385.00 - 388.00

CORE NO. 110 388.00 - 390.60 (CUT/RECEIVED = 2.60/2.60 m TOTAL BOXES = 2)

070 388.00 - 390.60

- KMax (0.05) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.1 - 3.56)
 - K90 (0.03) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.1 - 3.48)
 - Kv (0.01) IS OUTSIDE FOUR STANDARD DEVIATIONS (0.04 - 1.33)
 results verified

CORE NO. 111 390.60 - 393.50 (CUT/RECEIVED = 2.90/2.90 m TOTAL BOXES = 2)

NA 390.60 - 393.50

CORE NO. 112 393.50 - 396.40 (CUT/RECEIVED = 2.90/2.90 m TOTAL BOXES = 2)

NA 393.50 - 396.40

CORE NO. 113 396.40 - 399.40 (CUT/RECEIVED = 3.00/3.00 m TOTAL BOXES = 2)



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NA	396.40 - 399.40			
		CORE NO. 114 399.40 - 402.40	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	399.40 - 402.40			
		CORE NO. 115 402.40 - 405.40	(CUT/RECEIVED = 3.00/3.00 m	TOTAL BOXES = 2)
NA	402.40 - 405.40			
		CORE NO. 116 405.40 - 407.80	(CUT/RECEIVED = 2.40/2.40 m	TOTAL BOXES = 2)
NA	405.40 - 407.80			
		CORE NO. 117 407.80 - 410.10	(CUT/RECEIVED = 2.30/2.30 m	TOTAL BOXES = 2)
NA	407.80 - 410.10			
		CORE NO. 118 410.10 - 412.80	( CUT / RECEIVED = 2.70 / 2.70 m	TOTAL BOXES = 2)

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NA	410.10 - 412.80			
		CORE NO. 119 412.80 - 415.50	( CUT / RECEIVED = 2.70 / 2.70 m	TOTAL BOXES = 2)
NA	412.80 - 415.50			
		CORE NO. 120 415.50 - 418.00	( CUT / RECEIVED = 2.50 / 2.50 m	TOTAL BOXES = 2)
NA	415.50 - 418.00			
		CORE NO. 121 418.00 - 420.50	( CUT / RECEIVED = 2.50 / 2.30 m	TOTAL BOXES = 2)
NA	418.00 - 418.95			
SP071 NA	418.95 - 419.10 419.10 - 420.30			
LC	420.30 - 420.50			
		CORE NO. 122 420.50 - 422.60	( CUT / RECEIVED = 2.10 / 2.10 m	TOTAL BOXES = 2)
NA	420.50 - 422.60			
		CORE NO. 123 422.60 - 425.00	( CUT / RECEIVED = 2.40 / 2.40 m	TOTAL BOXES = 2)

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WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

# **CORE ANALYSIS - QUALITY CONTROL REPORT**

NA	422.60 - 425.00		
Approved :			
		Quality Control Supervisor	Date

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	inte (r	rval n)	Rep Thick	Rep Cuml.		Pord Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Km Rep	ax * Thickness	Wt.Avg Kmax	
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
					CORE N	O. 30 183.50	) - 186.50	( CUT / RECEIVI	ED = 3.00/3.0	00 m TOTAL	BOXES = 2)		
001 002	183.50 184.67	184.67 186.50	1.17 1.83	1.17 3.00	0.161 0.107	0.188 0.196	0.188 0.384	0.161 0.128	5.41 0.85	6.33 1.56	6.33 7.89	5.41 2.63	
					CORE N	O. 31 186.50	0 - 189.50	( CUT / RECEIVI	ED = 3.00/3.0	00 m TOTAL	BOXES = 2)		
NA	186.50	189.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	O. 32 189.50	0 - 192.50	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTAL	BOXES = 2)		
NA	189.50	192.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	O. 33 192.50	0 - 195.50	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTAL	BOXES = 2)		
NA	192.50	195.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	O. 34 195.50	0 - 198.50	(CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTAL	BOXES = 2)		
NA	195.50	198.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	O. 35 198.50	0 - 201.10	( CUT / RECEIVI	ED = 2.60 / 2.6	0 m TOTAL	BOXES = 2)		

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

# **CALCULATED DATA REPORT**

	inte (r	rval n)	Rep Thick	Rep Cuml.		Poro Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Rep K	max * Thickness	Wt.Avg Kmax
Sample	Тор	Base	(m)	(m)	Porosity	ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)
NA	198.50	201.10	2.60	-	-	-	-	-	-	-	-	-
					CORE I	NO. 36 201.10	0 - 202.00	( CUT / RECEIVI	ED = 0.90 / 0.9	90 m TOTA	L BOXES = 1)	
NA	201.10	202.00	0.90	-	-	-	-	-	-	-	-	-
					CORE I	NO. 37 202.00	0 - 204.70	( CUT / RECEIVI	ED = 2.70 / 2.7	70 m TOTA	L BOXES = 2)	
NA	202.00	204.70	2.70	-	-	-	-	-	-	-	-	-
					CORE I	NO. 38 204.70	0 - 207.70	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)	
NA	204.70	207.70	3.00	-	-	-	-	-	-	-	-	-
					CORE I	NO. 39 207.70	0 - 210.70	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)	
NA	207.70	210.70	3.00	-	-	-	-	-	-	-	-	-
					CORE I	NO. 40 210.70	0 - 213.70	( CUT / RECEIVE	ED = 3.00/3.0	00 m TOTA	L BOXES = 2)	
NA	210.70	213.70	3.00	-	-	-	-	-	-	-	-	-
					CORE I	NO. 41 213.70	0 - 216.70	( CUT / RECEIVI	ED = 3.00/3.0	00 m TOTA	L BOXES = 2)	

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		rval n)	Rep Thick	Rep Cuml.		Pord Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Kr Rep	nax * Thickness	Wt.Avg Kmax	
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
NA	213.70	216.70	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 42 216.70	219.70	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	216.70	219.70	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 43 219.70	) - 221.00	( CUT / RECEIVE	ED = 1.30 / 1.3	0 m TOTA	L BOXES = 1)		
NA	219.70	221.00	1.30	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 44 221.00	- 224.00	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	221.00	224.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 45 224.00	0 - 227.00	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	224.00	227.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 46 227.00	) - 229.00	( CUT / RECEIVE	ED = 2.00 / 2.0	00 m TOTA	L BOXES = 2)		
NA	227.00	229.00	2.00	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 47 229.00	) - 232.00	( CUT / RECEIVE	ED = 3.00/3.0	00 m TOTA	LBOXES = 2)		

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	inte (r	rval	Rep Thick	Rep Cuml.		Pord Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Kr Rep	nax * Thickness	Wt.Avg Kmax	
Sample	Top	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
NA	229.00	232.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 48 232.00	0 - 235.00	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	232.00	235.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 49 235.00	0 - 238.00	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	235.00	238.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 50 238.00	0 - 241.00	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	238.00	241.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 51 241.00	0 - 244.00	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	241.00	244.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 52 244.00	0 - 247.00	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	244.00	247.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 53 247.00	0 - 249.50	( CUT / RECEIVE	ED = 2.50 / 2.5	50 m TOTA	L BOXES = 2)		

: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

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		erval m)	Rep Thick	Rep Cuml.		Poros Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	K Rep	max * Thickness	Wt.Avg Kmax
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)
NA	247.00	249.50	2.50	-	-	-	-	-	-	-	-	-
					CORE I	NO. 54 249.50	- 252.50	( CUT / RECEIVI	ED = 3.00/3.0	00 m TOTA	L BOXES = 2)	
NA	249.50	252.50	3.00	-	-	-	-	-	-	-	-	-
					CORE I	NO. 55 252.50	- 255.40	( CUT / RECEIVI	ED = 2.90 / 2.9	90 m TOTA	L BOXES = 2)	
NA	252.50	255.40	2.90	-	-	-	-	-	-	-	-	-
					CORE I	NO. 56 255.40	- 258.00	( CUT / RECEIVE	ED = 2.60 / 2.6	60 m TOTA	L BOXES = 2)	
NA	255.40	258.00	2.60	-	-	-	-	-	-	-	-	-
					CORE I	NO. 57 258.00	- 261.00	( CUT / RECEIVE	ED = 3.00 / 2.8	30 m TOTA	L BOXES = 2)	
NA LC	258.00 260.80	260.80 261.00	2.80 0.20	-	-	-	-	-	-	-	-	-
LC	200.00	201.00	0.20	-	- CODE I	-	-	- / CUT / DECEN/	- 	- 70 TOTA	- L DOVEC - 2)	-
					CORE	NO. 58 261.00	- 203.70	( CUT / RECEIVI	ED = 2.7072.7	70 M 101 <i>P</i>	IL BUXES = 2)	
NA	261.00	263.70	2.70	-	-	-	-	-	-	-	-	-
					CORE I	NO. 59 263.70	- 265.80	(CUT / RECEIVE	ED = 2.10 / 2.10	10 m TOTA	L BOXES = 2)	

FORMATION : SHELL LAKE MEMBER/KEG RIVER

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	inte		Rep	Rep		Poros	•	Wt. Avg.	l/many		max *	Wt.Avg	
Sample	Top	n) Base	Thick (m)	Cuml. (m)	Porosity	Rep. Ø·m	Thickness Cuml.	Porosity (Arith.)	Kmax (mD)	Rep mD·m	Thickness Cuml.	Kmax (Arith.)	
NA	263.70	265.80	2.10	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 60 265.80	- 268.50	( CUT / RECEIVE	ED = 2.70 / 1.8	35 m TOTA	L BOXES = 2)		
NA LC	265.80 267.65	267.65 268.50	1.85 0.85	- -	-	-	-	-	- -	-	-	-	
					CORE I	NO. 61 268.50	- 271.50	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	268.50	271.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 62 271.50	- 274.50	( CUT / RECEIVE	ED = 3.00/3.0	00 m TOTA	L BOXES = 2)		
NA	271.50	274.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 63 274.50	- 277.50	( CUT / RECEIVE	ED = 3.00/3.0	00 m TOTA	L BOXES = 2)		
NA	274.50	277.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 64 277.50	- 280.50	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	277.50	280.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 65 280.50	- 283.50	( CUT / RECEIVE	ED = 3.00/3.0	00 m TOTA	L BOXES = 2)		

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	inte (r	rval	Rep Thick	Rep Cuml.		Pord Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Kr Rep	nax * Thickness	Wt.Avg Kmax	
Sample	Top (.	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
NA	280.50	283.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 66 283.50	0 - 286.50	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	283.50	286.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 67 286.50	0 - 289.50	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	286.50	289.50	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 68 289.50	0 - 292.80	( CUT / RECEIVI	ED = 3.30 / 3.3	30 m TOTA	L BOXES = 3)		
NA	289.50	292.80	3.30	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 69 292.80	0 - 295.80	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	292.80	295.80	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 70 295.80	0 - 299.00	( CUT / RECEIVE	ED = 3.20 / 3.2	20 m TOTA	L BOXES = 3)		
NA	295.80	299.00	3.20	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 71 299.00	0 - 302.00	( CUT / RECEIVI	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		

FORMATION : SHELL LAKE MEMBER/KEG RIVER

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	inte (n		Rep Thick	Rep Cuml.		Poro Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Kr Rep	max * Thickness	Wt.Avg Kmax	
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
NA	299.00	302.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 72 302.00	- 304.50	( CUT / RECEIVE	ED = 2.50 / 1.5	50 m TOTA	L BOXES = 1)		
NA LC	302.00 303.50	303.50 304.50	1.50 1.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 73 304.50	- 307.00	(CUT/RECEIVE	ED = 2.50 / 2.5	50 m TOTA	L BOXES = 2)		
NA	304.50	307.00	2.50	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 74 307.00	310.00	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	307.00	310.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 75 310.00	313.00	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	310.00	313.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 76 313.00	316.00	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTA	L BOXES = 2)		
NA	313.00	316.00	3.00	-	-	-	-	-	-	-	-	-	
					CORE I	NO. 77 316.00	- 319.00	( CUT / RECEIVE	ED = 3.00 / 2.8	30 m TOTA	L BOXES = 2)		

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

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		erval m)	Rep Thick	Rep Cuml.		Pord Rep.	osity * Thickness	Wt. Avg. Porosity	Kmax	Kr Rep	nax * Thickness	Wt.Avg Kmax	
Sample	Тор	Base	(m)	(m)	Porosity	Ø⋅m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
NA LC	316.00 318.80	318.80 319.00	2.80 0.20	-	- -	-	-	- -	-	-	- -	-	
					CORE N	NO. 78 319.0	0 - 321.50	(CUT / RECEIV	ED = 2.50 / 1.7	70 m TOTA	BOXES = 2)		
NA LC	319.00 320.70	320.70 321.50	1.70 0.80	-	-	- -	-	- -	-	- -	-	-	
					CORE N	NO. 79 321.5	0 - 324.00	(CUT / RECEIV	ED = 2.50 / 2.5	50 m TOTA	BOXES = 2)		
NA	321.50	324.00	2.50	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 80 324.0	0 - 326.85	(CUT / RECEIV	ED = 2.85 / 2.8	35 m TOTA	BOXES = 2)		
NA	324.00	326.85	2.85	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 81 326.8	5 - 328.00	(CUT / RECEIV	ED = 1.15 / 1.1	15 m TOTA	BOXES = 1)		
NA	326.85	328.00	1.15	-	-	-	-	-	-	-	-	-	
					CORE N	NO. 82 328.0	0 - 331.00	(CUT / RECEIV	ED = 3.00 / 3.0	00 m TOTA	BOXES = 2)		
NA 003	328.00 328.61	328.61 329.51	0.61 0.90	-	-	-	-	-	-	-	-	-	

: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

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WELL NAME : SUNCOR OB LEWIS
DRILLING FLUID : WATER BASE MUD

# **CALCULATED DATA REPORT**

		erval n)	Rep Thick	Rep Cuml.		Por Rep.	osity * Thickness	Wt. Avg. Porosity	Kmax	Kr Rep	nax * Thickness	Wt.Avg Kmax
Sample	Top	Base	(m)	(m)	Porosity	ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)
004	329.51	330.00	0.49	3.49	0.127	0.062	0.446	0.128	0.40	0.20	8.08	2.32
005	330.00	331.00	1.00	4.49	0.018	0.018	0.464	0.103	0.81	0.81	8.89	1.98
					CORE	IO. 83 331.0	0 - 334.00	( CUT / RECEIVI	ED = 3.00/3.0	JUIII TOTA	L BUXES - 2)	
006	331.00	331.60	0.60	5.09	0.064	0.038	0.502	0.099	0.09	0.05	8.95	1.76
007	331.60	332.13	0.53	5.62	0.026	0.014	0.516	0.092	0.03	0.02	8.96	1.59
800	332.13	332.67	0.54	6.16	0.044	0.024	0.540	0.088	0.11	0.06	9.02	1.46
NA	332.67	333.52	0.85	-	-	-	-	-	-	-	-	-
009	333.52	334.00	0.48	6.64	0.061	0.029	0.569	0.086	3.96	1.90	10.9	1.64
					CORE N	IO. 84 334.0	0 - 336.00	( CUT / RECEIVI	ED = 2.00 / 2.0	00 m TOTA	L BOXES = 2)	
010	334.00	335.64	1.64	8.28	0.057	0.093	0.662	0.080	7.57	12.4	23.3	2.82
SP011	335.64	336.00	0.36	8.64	0.047	0.017	0.679	0.079	0.01	0.00	23.3	2.70
					CORE N	IO. 85 336.0	0 - 337.50	( CUT / RECEIVI	ED = 1.50 / 1.5	50 m TOTA	L BOXES = 1)	
012	336.00	336.97	0.97	9.61	0.077	0.075	0.754	0.078	18.2	17.7	41.0	4.27
NA	336.97	337.50	0.53	-	-	-	-	-	-	-	-	-
					CORE N	IO. 86 337.5	0 - 340.50	( CUT / RECEIVI	ED = 3.00 / 2.8	30 m TOTA	L BOXES = 2)	
NA	337.50	339.25	1.75	_	_	_	_	-	-	-	_	-
013	339.25	340.30	1.05	10.66	0.051	0.054	0.808	0.076	0.09	0.09	41.1	3.85



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

#### **CALCULATED DATA REPORT**

		erval m)	Rep Thick	Rep Cuml.		Pord Rep.	osity * Thickness	Wt. Avg. Porosity	Kmax	Kn Rep	nax * Thickness	Wt.Avg Kmax
Sample	Top	Base	(m)	(m)	Porosity	ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)
LC	340.30	340.50	0.20	-	-	-	-	-	-	-	-	-
					CORE N	IO. 87 340.5	0 - 343.20	( CUT / RECEIVE	ED = 2.70 / 2.7	70 m TOTAL	BOXES = 2)	
014 015	340.50 341.67	341.67 342.08	1.17 0.41	11.83 12.24	0.067 0.087	0.078 0.036	0.886 0.922	0.075 0.075	5.70 1.91	6.67 0.78	47.8 48.5	4.04 3.97
NA SP016	342.08 342.33	342.33 343.20	0.25 0.87	13.11	0.007	0.030	0.963	0.073	0.07	0.76	- 48.6	3.71
01 010	042.00	040.20	0.07	10.11		IO. 88 343.2		( CUT / RECEIVE				5.7 1
SP017	343.20	343.93	0.73	13.84	0.114	0.083	1.046	0.076	0.27	0.20	48.8	3.53
018	343.93	344.06	0.13	13.97	0.069	0.009	1.055	0.076	4.86	0.63	49.4	3.54
SP019 SP020	344.06 344.20	344.20 344.58	0.14 0.38	14.11 14.49	0.025 0.030	0.004	1.059 1.070	0.075 0.074	0.01 0.01	0.00 0.00	49.4	3.50 3.41
021	344.58	345.50	0.36	15.41	0.030	0.011 0.093	1.163	0.074	3.25	2.99	49.4 52.4	3.40
LC	345.50	346.00	0.50	-	-	-	-	-	-	-	-	-
					CORE N	IO. 89 346.0	0 - 348.00	( CUT / RECEIVE	ED = 2.00 / 1.9	90 m TOTAL	BOXES = 2)	
022	346.00	347.30	1.30	16.71	0.108	0.140	1.303	0.078	14.2	18.5	70.9	4.24
		347.50	0.20	16.91	0.046	0.009	1.312	0.078	191.	38.2	109.	6.45



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

# CALCULATED DATA REPORT

	inte (r	rval	Rep Thick	Rep Cuml.		Pord Rep.	sity * Thickness	Wt. Avg. Porosity	Kmay	Kn Rep	nax * Thickness	Wt.Avg Kmax
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	Kmax (mD)	mD·m	Cuml.	(Arith.)
024 LC	347.50 347.90	347.90 348.00	0.40 0.10	17.31 -	0.048	0.019 -	1.331 -	0.077	6.51	2.60	112. -	6.45 -
					CORE N	IO. 90 348.00	349.00	( CUT / RECEIVI	ED = 1.00 / 0.6	60 m TOTAL	BOXES = 1)	
SP025 LC	348.00 348.60	348.60 349.00	0.60 0.40	17.91 -	0.032	0.019 -	1.350 -	0.075 -	0.01	0.01	112. -	6.24
					CORE N	IO. 91 349.00	) - 349.20	( CUT / RECEIVI	ED = 0.20 / 0.2	20 m TOTAI	BOXES = 1)	
NA	349.00	349.20	0.20	-	-	-	-	-	-	-	-	-
					CORE N	IO. 92 349.20	350.00	( CUT / RECEIVI	ED = 0.80 / 0.8	30 m TOTAI	BOXES = 1)	
026	349.20	350.00	0.80	18.71	0.027	0.022	1.372	0.073	20.2	16.2	128.	6.83
					CORE N	IO. 93 350.00	352.00	( CUT / RECEIVI	ED = 2.00 / 0.9	90 m TOTAI	BOXES = 1)	
SP027 LC	350.00 350.90	350.90 352.00	0.90 1.10	19.61	0.050	0.045	1.417	0.072	0.10	0.09	128.	6.52
LO	330.90	332.00	1.10	-				- ( CUT / RECEIVI	- ED = 200/46	- 	- DOVES - 21	-
					CORE	10. 94 332.00	) - 35 <del>4</del> .00	( CUI / RECEIVI	ED - 2.00/1.0	JUIII TUTAL	_ BUAES - 2)	
028	352.00	352.32	0.32	-	-	-	-	-	-	-	-	-



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

FORMATION : SHELL LAKE MEMBER/KEG RIVER
WELL NAME : SUNCOR OB LEWIS
DRILLING FLUID : WATER BASE MUD

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		erval m)	Rep Thick	Rep Cuml.		Poro Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Kn Rep	nax * Thickness	Wt.Avg Kmax
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD⋅m	Cuml.	(Arith.)
029	352.32	353.01	0.69	20.30	0.154	0.106	1.523	0.075	30.5	21.0	149.	7.34
030 LC	353.01 353.60	353.60 354.00	0.59 0.40	-	-	-	-	-	-	-	-	-
					CORE N	O. 95 354.00	357.00	( CUT / RECEIVE	ED = 3.00 / 3.0	00 m TOTAI	BOXES = 2)	
031	354.00	354.79	0.79	21.09	0.129	0.102	1.625	0.077	7.17	5.66	155.	7.33
SP032 033	354.79 354.95	354.95 355.20	0.16 0.25	21.25 21.50	0.150 0.185	0.024 0.046	1.649 1.695	0.078 0.079	1.36 17.2	0.22 4.30	155. 159.	7.29 7.40
034	355.20	356.64	1.44	22.94	0.160	0.230	1.925	0.084	14.6	21.0	180.	7.86
035	356.64	357.00	0.36	23.30	0.157	0.057	1.982	0.085	5.77	2.08	182.	7.82
					CORE N	O. 96 357.00	357.70	( CUT / RECEIVE	ED = 0.70 / 0.7	70 m TOTAI	BOXES = 1)	
036	357.00	357.70	0.70	24.00	0.144	0.101	2.083	0.087	11.7	8.19	190.	7.94
					CORE N	O. 97 357.70	360.00	( CUT / RECEIVE	ED = 2.30 / 2.3	30 m TOTAI	BOXES = 2)	
037	357.70	358.46	0.76	24.76	0.207	0.157	2.240	0.090	23.0	17.5	208.	8.40
038	358.46	359.13	0.67	25.43	0.206	0.138	2.378	0.094	630.	422.	630.	24.8
039	359.13	360.00	0.87	26.30	0.144	0.125	2.503	0.095	19.4	16.9	647.	24.6
					CORE N	O. 98 360.00	- 362.10	(CUT / RECEIVE	ED = 2.10 / 0.8	30 m TOTAI	BOXES = 1)	

<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

FORMATION : SHELL LAKE MEMBER/KEG RIVER
WELL NAME : SUNCOR OB LEWIS
DRILLING FLUID : WATER BASE MUD

# **CALCULATED DATA REPORT**

		rval	Rep	Rep		Poros	•	Wt. Avg.			nax *	Wt.Av
	(r	,	Thick	Cuml.		Rep.	Thickness	Porosity	Kmax	Rep	Thickness	Kmax
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)
NA	360.00	360.80	0.80	-	-	-	-	-	-	-	-	_
LC	360.80	362.10	1.30	-	-	-	-	-	-	-	-	-
					CORE NO	). 99 362.10	- 364.00	( CUT / RECEIVE	ED = 1.90 / 1.9	90 m TOTAL	LBOXES = 2)	
040	362.10	362.55	0.45	26.75	0.115	0.052	2.555	0.096	42.4	19.1	666.	24.9
041	362.55	363.34	0.79	27.54	0.084	0.066	2.621	0.095	6.26	4.95	671.	24.4
042	363.34	364.00	0.66	28.20	0.197	0.130	2.751	0.098	104.	68.6	740.	26.2
					CORE NO	). 100 364.00	364.30	(CUT/RECEIV	/ED = 0.30 / 0.00	.30 m TOTA	AL BOXES = 1)	
SP043	364.00	364.30	0.30	28.50	0.087	0.026	2.777	0.097	4.96	1.49	741.	26.0
					CORE NO	). 101 364.30	367.00	( CUT / RECEIV	/ED = 2.70 / 2	.70 m TOTA	AL BOXES = 2)	
044	364.30	365.03	0.73	29.23	0.068	0.050	2.827	0.097	0.14	0.10	741.	25.4
045	365.03	365.28	0.25	29.48	0.094	0.024	2.851	0.097	5.11	1.28	742.	25.2
046	365.28	365.72	0.44	29.92	0.087	0.038	2.889	0.097	0.20	0.09	743.	24.8
047	365.72	366.28	0.56	30.48	0.132	0.074	2.963	0.097	1.42	0.80	743.	24.4
048	366.28	367.00	0.72	31.20	0.085	0.061	3.024	0.097	3.14	2.26	746.	23.9
					CORE NO	). 102 367.00	370.00	( CUT / RECEIV	/ED = 3.00 / 3	.00 m TOTA	AL BOXES = 2)	
049	367.00	367.77	0.77	31.97	0.063	0.049	3.073	0.096	0.32	0.25	746.	23.3



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<sup>\* -</sup> affected by fracture or crack as mentioned in remarks

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

# **CALCULATED DATA REPORT**

		erval m)	Rep Thick	Rep Cuml.		Poro Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Kn Rep	nax * Thickness	Wt.Avg Kmax	
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
050	367.77	368.50	0.73	32.70	0.084	0.061	3.134	0.096	30.2	22.0	768.	23.5	
051 052	368.50 369.28	369.28 370.00	0.78 0.72	33.48 34.20	0.139 0.083	0.108 0.060	3.242 3.302	0.097 0.097	6.35 0.26	4.95 0.19	773. 773.	23.1 22.6	
					CORE N	NO. 103 370.0	00 - 371.00	(CUT/RECEIV	/ED = 1.00/0	.90 m TOTA	AL BOXES = 1)		
053 LC	370.00 370.90	370.90 371.00	0.90 0.10	35.10 -	0.106 -	0.095 -	3.397	0.097	1.24 -	1.12 -	774. -	22.1 -	
					CORE N	NO. 104 371.0	00 - 374.00	(CUT/RECEIN	/ED = 3.00/3	.00 m TOT	AL BOXES = 2)		
054 055 056 057 NA	371.00 371.26 371.89 372.42 372.77	371.26 371.89 372.42 372.77 373.18	0.26 0.63 0.53 0.35 0.41	35.36 35.99 36.52 36.87	0.120 0.149 0.143 0.135	0.031 0.094 0.076 0.047	3.428 3.522 3.598 3.645	0.097 0.098 0.099 0.099	3.40 9.20 4.17 2.70	0.88 5.80 2.21 0.95	775. 781. 783. 784.	21.9 21.7 21.4 21.3	
058	373.18	374.00	0.82	37.69	0.103	0.084 NO. 105 374.0	3.729	0.099	3.18	2.61	787. AL BOXES = 2)	20.9	
					CORE	NO. 105 374.0	0 - 377.00	(CUI/RECEN	/ED = 3.00/3	.00 111 1017	AL BUXES - 2)		
NA 059 060	374.00 374.54 375.50	374.54 375.50 376.25	0.54 0.96 0.75	38.65 39.40	- 0.120 0.168	- 0.115 0.126	3.844 3.970	0.099 0.101	7.12 9.49	6.84 7.12	793. 801.	20.5 20.3	

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FORMATION : SHELL LAKE MEMBER/KEG RIVER
WELL NAME : SUNCOR OB LEWIS
DRILLING FLUID : WATER BASE MUD

# **CALCULATED DATA REPORT**

		erval m)	Rep Thick	Rep Cuml.		Poros Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Kn Rep	nax * Thickness	Wt.Avg Kmax
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)
061	376.25	377.00	0.75	40.15	0.160	0.120	4.090	0.102	15.6	11.7	812.	20.2
					CORE N	O. 106 377.0	0 - 380.00	(CUT/RECEI	VED = 3.00/3	.00 m TOTA	AL BOXES = 2)	
062	377.00	377.75	0.75	40.90	0.095	0.071	4.161	0.102	1.32	0.99	813.	19.9
063	377.75	378.50	0.75	41.65	0.075	0.056	4.217	0.101	0.25	0.19	813.	19.5
064	378.50	379.25	0.75	42.40	0.059	0.044	4.261	0.100	0.06	0.05	813.	19.2
065	379.25	380.00	0.75	43.15	0.063	0.047	4.308	0.100	0.03	0.02	813.	18.9
					CORE N	O. 107 380.0	0 - 382.00	(CUT/RECEI	VED = 2.00/2	.00 m TOTA	AL BOXES = 2)	
066	380.00	380.44	0.44	43.59	0.087	0.038	4.346	0.100	3.39	1.49	815.	18.7
067	380.44	382.00	1.56	45.15	0.203	0.317	4.663	0.103	12.8	20.0	835.	18.5
					CORE N	O. 108 382.0	0 - 385.00	( CUT / RECEI	VED = 3.00/3	.00 m TOTA	AL BOXES = 2)	
068	382.00	383.39	1.39	46.54	0.173	0.240	4.903	0.105	10.3	14.3	849.	18.2
069	383.39	385.00	1.61	48.15	0.138	0.222	5.125	0.106	2.35	3.78	853.	17.7
					CORE N	O. 109 385.0	0 - 388.00	( CUT / RECEI	VED = 3.00/3	.00 m TOTA	AL BOXES = 2)	
NA	385.00	388.00	3.00	-	-	-	-	-	-	-	-	-
					CORE N	O. 110 388.0	0 - 390.60	(CUT/RECEI	VED = 2.60/2	.60 m TOT <i>A</i>	AL BOXES = 2)	

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FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

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		erval m)	Rep Thick	Rep Cuml.		Poro Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Km Rep	nax * Thickness	Wt.Avg Kmax	
Sample	Top	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
070	388.00	390.60	2.60	50.75	0.083	0.216	5.341	0.105	0.05	0.13	853.	16.8	
					CORE N	O. 111 390.6	60 - 393.50	(CUT/RECEIV	VED = 2.90/2	.90 m TOTA	L BOXES = 2)		
NA	390.60	393.50	2.90	-	-	-	-	-	-	-	-	-	
					CORE N	O. 112 393.5	60 - 396.40	(CUT / RECEIV	VED = 2.90/2	.90 m TOTA	L BOXES = 2)		
NA	393.50	396.40	2.90	-	-	-	-	-	-	-	-	-	
					CORE N	O. 113 396.4	0 - 399.40	(CUT / RECEIV	VED = 3.00/3	.00 m TOTA	L BOXES = 2)		
NA	396.40	399.40	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	O. 114 399.4	0 - 402.40	(CUT / RECEIV	VED = 3.00/3	.00 m TOTA	L BOXES = 2)		
NA	399.40	402.40	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	O. 115 402.4	0 - 405.40	(CUT / RECEIV	VED = 3.00/3	.00 m TOTA	L BOXES = 2)		
NA	402.40	405.40	3.00	-	-	-	-	-	-	-	-	-	
					CORE N	O. 116 405.4	0 - 407.80	(CUT/RECEIV	VED = 2.40/2	.40 m TOTA	L BOXES = 2)		

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

#### **CALCULATED DATA REPORT**

	inte (n		Rep Thick	Rep Cuml.		Poro Rep.	sity * Thickness	Wt. Avg. Porosity	Kmax	Km Rep	ax * Thickness	Wt.Avg Kmax	
Sample	Тор	Base	(m)	(m)	Porosity	Ø·m	Cuml.	(Arith.)	(mD)	mD·m	Cuml.	(Arith.)	
NA	405.40	407.80	2.40	-	-	-	-	-	-	-	-	-	
					CORE N	O. 117 407.8	0 - 410.10	( CUT / RECEI	VED = 2.30 / 2	.30 m TOTA	L BOXES = 2)		
NA	407.80	410.10	2.30	-	-	-	-	-	-	-	-	-	
					CORE N	O. 118 410.1	0 - 412.80	(CUT/RECEI	VED = 2.70/2	.70 m TOTA	L BOXES = 2)		
NA	410.10	412.80	2.70	-	-	-	-	-	-	-	-	-	
					CORE N	O. 119 412.8	0 - 415.50	(CUT/RECEI	VED = 2.70/2	.70 m TOTA	L BOXES = 2)		
NA	412.80	415.50	2.70	-	-	-	-	-	-	-	-	-	
					CORE N	O. 120 415.5	0 - 418.00	( CUT / RECEI	VED = 2.50/2	.50 m TOTA	L BOXES = 2)		
NA	415.50	418.00	2.50	-	-	-	-	-	-	-	-	-	
					CORE N	O. 121 418.0	0 - 420.50	(CUT/RECEI	VED = 2.50/2	.30 m TOTA	L BOXES = 2)		
NA SP071 NA	418.00 418.95 419.10	418.95 419.10 420.30	0.95 0.15 1.20	- 50.90	- 0.118 -	- 0.018	- 5.359 -	- 0.105 -	5.91	0.89	- 854. -	- 16.8 -	

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FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

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	inter		Rep	Rep			rosity *	Wt. Avg.	1,4		nax *	Wt.Avg
Sample	Top	ı) Base	Thick (m)	Cuml. (m)	Porosity	Rep. Ø·m	Thickness Cuml.	Porosity (Arith.)	Kmax (mD)	Rep mD·m	Thickness Cuml.	Kmax (Arith.)
LC	420.30	420.50	0.20	-	-	-	-	-	-	-	-	-
					CORE 1	NO. 122 420	).50 - 422.60	( CUT / RECEIV	VED = 2.10/2	.10 m TOTA	L BOXES = 2)	
NA	420.50	422.60	2.10	-	-	-	-	-	-	-	-	-
					CORE 1	NO. 123 422	2.60 - 425.00	( CUT / RECEIV	VED = 2.40/2	.40 m TOTA	L BOXES = 2)	
NA	422.60	425.00	2.40	-	-	_	-	-	-	-	-	-

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

#### STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

#### **GROUPING BY POROSITY RANGES**

Porc	osity	Sam	ples	Met	res	Wt. Avg. Porosity	Wt. Avç	g. Kmax	Freque	ency %	
Rar	nge	In Range	Cuml.	In Range	Cuml.	(Arith.)	(Arith.)	Geom	In Rng	Cuml.	
0.001 -	0.0190	1	1	1.00	1.00	0.018	0.81	0.81	2.03	2.03	
0.020 -	0.0390	4	5	1.65	2.65	0.029	0.02	0.01	3.35	5.38	
0.040 -	0.0599	8	13	6.51	9.16	0.052	2.36	0.30	13.22	18.61	
0.060 -	0.0799	9	22	6.35	15.51	0.068	4.33	0.76	12.90	31.51	
0.080 -	0.0999	11	33	8.15	23.66	0.086	4.38	0.71	16.55	48.06	
0.100 -	0.1199	8	41	7.10	30.76	0.107	6.60	2.45	14.42	62.48	
0.120 -	0.1399	8	49	5.80	36.56	0.131	4.15	3.16	11.78	74.26	
0.140 -	0.1599	7	56	3.94	40.50	0.148	14.3	11.1	8.00	82.27	
0.160 -	0.1799	5	61	5.50	46.00	0.165	11.0	10.3	11.17	93.44	
0.180 -	0.1999	2	63	0.91	46.91	0.194	80.2	63.4	1.85	95.29	
0.200 -	0.2199	2	65	2.32	49.23	0.204	16.1	15.5	4.71	100.00	



PAGE DATE

W/O No

: 58

: 17-Mar-2015

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

#### STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

#### **GROUPING BY PERMEABILITY RANGES**

Perme	eability	Sam	oles	Met	res	Wt. Avg. Porosity	Wt. Avç	g. Kmax	Freque	ency %	
Rai	nge	In Range	Cuml.	In Range	Cuml.	(Arith.)	(Arith.)	Geom	In Rng	Cuml.	
0.010 -	0.0190	4	4	1.48	1.48	0.034	0.01	0.01	3.01	3.01	
0.020 -	0.0390	2	6	1.28	2.76	0.048	0.03	0.03	2.60	5.61	
0.040 -	0.0790	3	9	4.22	6.98	0.071	0.06	0.06	8.57	14.18	
0.080 -	0.1590	5	14	3.82	10.80	0.055	0.10	0.10	7.76	21.94	
0.160 -	0.3190	4	18	2.64	13.44	0.090	0.25	0.25	5.36	27.30	
0.320 -	0.6390	2	20	1.26	14.70	0.088	0.35	0.35	2.56	29.86	
0.640 -	1.2490	3	23	3.73	18.43	0.083	0.93	0.92	7.58	37.44	
1.250 -	2.4990	5	28	3.49	21.92	0.122	1.88	1.82	7.09	44.53	
2.500 -	4.9990	10	38	4.95	26.87	0.100	3.52	3.47	10.05	54.58	
5.000 -	9.9990	13	51	9.84	36.71	0.111	6.87	6.76	19.99	74.57	
10.000 -	19.9990	9	60	9.23	45.94	0.151	14.4	14.1	18.75	93.32	
20.000 -	39.9990	3	63	2.18	48.12	0.149	27.8	27.5	4.43	97.75	
40.000 -	79.9990	1	64	0.45	48.57	0.115	42.4	42.4	0.91	98.66	
80.000 -	159.9990	1	65	0.66	49.23	0.197	104.	104.	1.34	100.00	

PAGE DATE

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: 59

: 17-Mar-2015

FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

PAGE : 60 DATE : 17-Mar-2015 W/O No : RC31252

#### STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

POROSITY-METRES OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

Porosity	M	etres	Capacit	y Lost	Capacity R	emaining	Wt. Av	g. Arith.	
Cut off	Lost	Remaining	Por-Metres	%	Por-Metres	%	Mean	Median	
-	0.00	50.90	-	0.00	5.363	100.00	0.105		
0.020	1.00	49.90	0.018	0.34	5.345	99.66	0.107		
0.040	3.45	47.45	0.087	1.63	5.275	98.37	0.111		
0.060	10.16	40.74	0.434	8.09	4.929	91.91	0.121		
0.080	16.51	34.39	0.865	16.13	4.498	83.87	0.131		
0.100	24.66	26.24	1.563	29.14	3.800	70.86	0.145		
0.120	32.98	17.92	2.471	46.07	2.892	53.93	0.161		
0.140	37.56	13.34	3.087	57.56	2.276	42.44	0.171		
0.160	43.69	7.21	4.020	74.95	1.343	25.05	0.186		
0.180	47.00	3.90	4.574	85.30	0.788	14.70	0.202		
0.200	47.91	2.99	4.751	88.59	0.612	11.41	0.205		
0.220	50.90	0.00	5.363	100.00	-	0.00	0.00		

Total Storage Capacity in Porosity-Metres = 5.363



FORMATION : SHELL LAKE MEMBER/KEG RIVER

WELL NAME : SUNCOR OB LEWIS DRILLING FLUID : WATER BASE MUD

PAGE : 61 DATE : 17-Mar-2015 W/O No : RC31252

#### STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

MILLIDARCY-METRES OF FLOW CAPACITY FOR SELECTED PERMEABILITY CUT OFF

Permeability	Metres		Capacity Lost		Capacity Remaining		Wt. Avg	g. Arith.
Cut off	Lost	Remaining	mD-m	%	mD-m	%	Mean	Median
0.000	0.00	49.23	0.000	0.00	377.604	100.00	0.000	
0.010	1.48	47.75	0.015	0.00	377.589	100.00	0.015	
0.020	1.48	47.75	0.015	0.00	377.589	100.00	0.030	
0.040	2.76	46.47	0.053	0.01	377.551	99.99	0.083	
0.080	6.98	42.25	0.289	0.08	377.315	99.92	0.372	
0.160	10.80	38.43	0.689	0.18	376.915	99.82	1.061	
0.320	14.21	35.02	1.595	0.42	376.009	99.58	2.657	
0.640	14.70	34.53	1.791	0.47	375.813	99.53	4.448	
1.250	18.43	30.80	5.273	1.40	372.331	98.60	9.721	
2.500	21.92	27.31	11.842	3.14	365.762	96.86	21.563	
5.000	26.87	22.36	29.252	7.75	348.352	92.25	50.815	
10.000	36.71	12.52	96.822	25.64	280.782	74.36	147.637	
20.000	45.94	3.29	229.313	60.73	148.291	39.27	376.950	
40.000	48.12	1.11	289.884	76.77	87.720	23.23	666.835	
80.000	48.57	0.66	308.964	81.82	68.640	18.18	975.799	
160.000	49.23	0.00	377.604	100.00	0.000	0.00	1353.403	

Total Flow Capacity in MilliDarcy-Metres (Arithmetic) = 377.604



: SUNCOR ENERGY INC. : 100/11-27-092-08W4M/0 **COMPANY** LOCATION

**FORMATION** : SHELL LAKE MEMBER/KEG RIVER

: SUNCOR OB LEWIS : WATER BASE MUD **WELL NAME** DRILLING FLUID

# SUMMARY OF CORE DATA REPORT PERMEABILITY RANGES, MILLIDARCY

	Total	100.00 +	10.00 - 99.99	1.00 - 9.99	0.50 - 0.99	0.10 - 0.49	0.01 - 0.09	< 0.01
Thickness (m)	49.23	0.66	11.86	19.18	2.83	6.07	8.63	0.00
Fraction of Analyzed Core		0.013	0.241	0.390	0.057	0.123	0.175	0.000
Porosity Thickness (por-m)	5.194	0.130	1.772	2.107	0.214	0.467	0.505	0.000
Permeability Thickness (mD-m)	377.6	68.64	212.14	92.67	2.37	1.35	0.44	0.00
Wt. Average Porosity	0.106	0.197	0.149	0.110	0.076	0.077	0.059	0.000
Wt. Average Permeability	7.67	104.00	17.89	4.83	0.84	0.22	0.05	0.00
Wt. Average Residual Oil	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wt. Average Residual Water	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Wt. Average (geom.) Kmax. mD for all Samples = 1.69

Wt. Average (harm.) Kmax. mD for all Samples = 0.15



PAGE DATE

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: 62 : 17-Mar-2015

Company: SUNCOR ENERGY INC. Location: 100/11-27-092-08W4M/0

Well Name: SUNCOR OB LEWIS

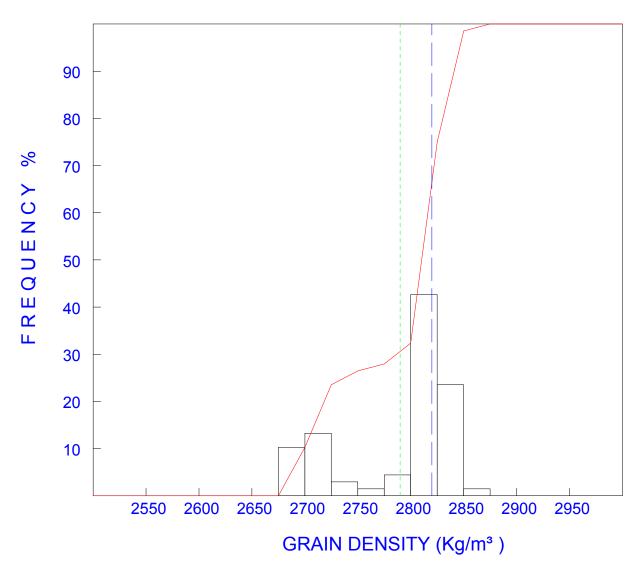
Interval: 183.50-425.00m

Formation: SHELL LAKE MEMBER/KEG RIVER

FIGURE: 1

Date: 17-Mar-2015 AGAT Job: RC31252

# **GRAIN DENSITY DISTRIBUTION**



Arithmetic Mean Mean: 2790
Median ----- Median: 2820
Cum. Frequency %



Company: SUNCOR ENERGY INC. Location: 100/11-27-092-08W4M/0

Interval: 183.50-425.00m

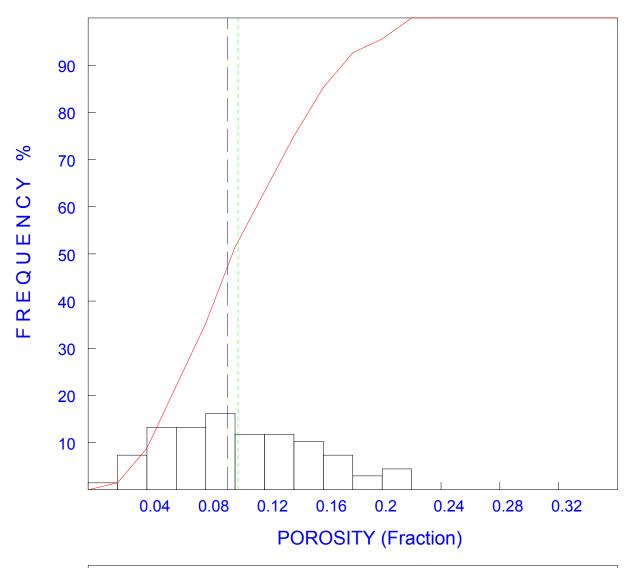
Well Name : SUNCOR OB LEWIS Date :

Formation: SHELL LAKE MEMBER/KEG RIVER

FIGURE: 2

Date: 17-Mar-2015 AGAT Job: RC31252

# POROSITY DISTRIBUTION



Arithmetic Mean Mean: 0.102

Median ----- Median: 0.095

Cum. Frequency %



Company: SUNCOR ENERGY INC.

Location: 100/11-27-092-08W4M/0 Well Name: SUNCOR OB LEWIS

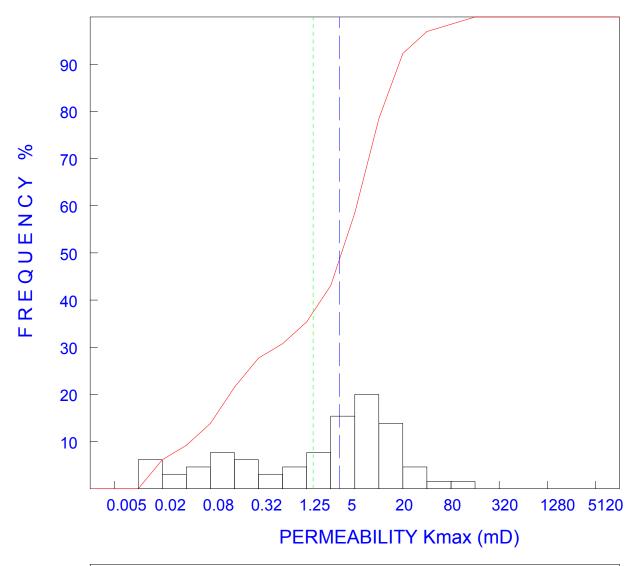
Interval: 183.50-425.00m

Formation: SHELL LAKE MEMBER/KEG RIVER

FIGURE: 3

Date: 17-Mar-2015 AGAT Job: RC31252

# PERMEABILITY Kmax DISTRIBUTION



Arithmetic Mean Mean: 1.57 Median Median: 3.39

Cum. Frequency %



Company: SUNCOR ENERGY INC.

Interval: 183.50-425.00m

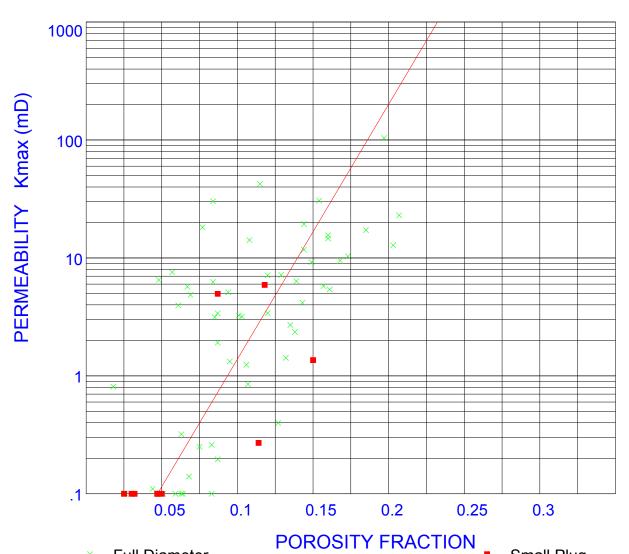
Location: 100/11-27-092-08W4M/0 Well Name: SUNCOR OB LEWIS

Formation: SHELL LAKE MEMBER/KEG RIVER

FIGURE: 4

Date: 17-Mar-2015 AGAT Job: RC31252

# POROSITY-PERMEABILITY CORRELATION



× - Full Diameter

- Small Plug

Equation of Line : Log (Kmax) = -2.02 + 21.61\* Porosity

**Correlation Coefficient** r = 0.7





#### AGAT LABORATORIES CORE SERVICES

#### SAMPLE HANDLING AND ANALYSIS INFORMATION

Company: SUNCOR ENERGY INC.

Coring Equipment: Diamond

W/O Number: RC31252

Well: SUNCOR OB LEWIS

Coring Fluid: Water Base Mud

Date: 17-Mar-15

#### **HANDLING**

Core Transported in : Tubes/Frozen

Cutting Solution : Brine
Cleaning Solvent : Toluene
Extraction : Vapour phase
Cleaning time : 888 hours
Drying Equipment : Convection Oven

Drying Equipment : Convection Oven Drying Time/Temp : 48 hours @ 108°C

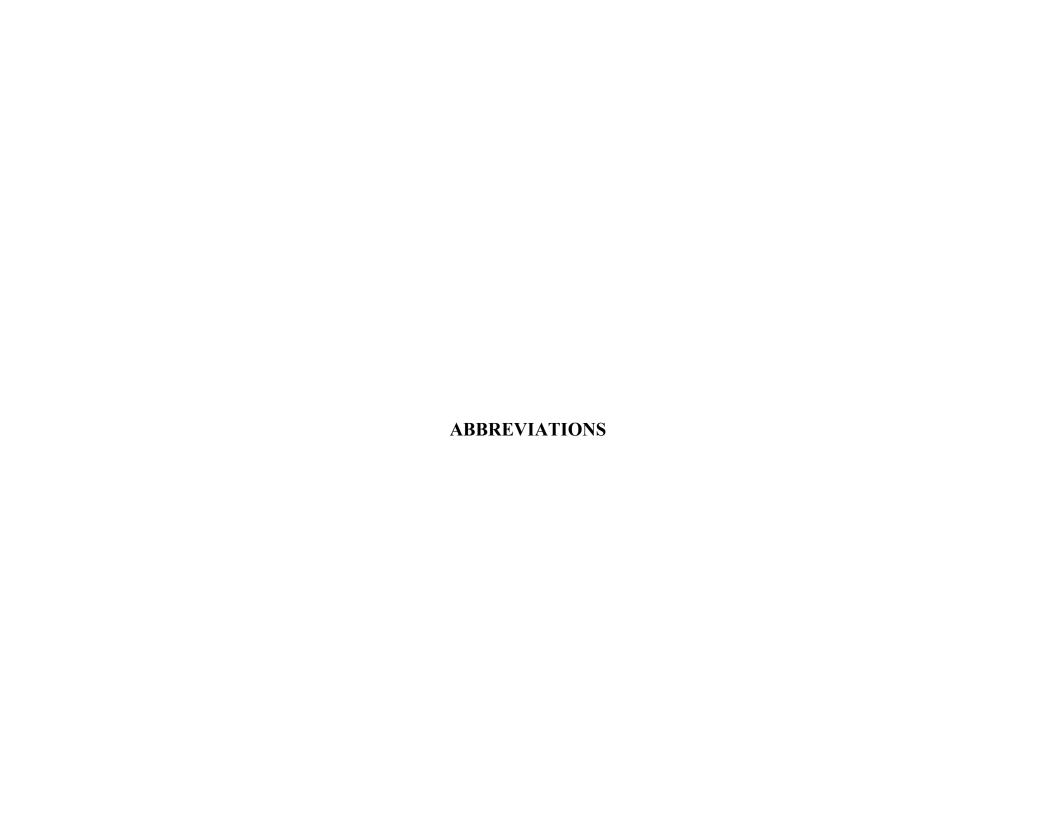
#### **ANALYSIS**

Grain volume measured by Boyle's Law using helium Bulk volume measured by calipering on right-cylindrical samples Permeability measured on 0.09m full diameter samples Permeability measured on 38.1mm diameter drilled plugs Full diameter core sandblasted Kh measurements

#### **REMARKS**

Two (2) sets color photos of whole core (CN30-70/CN115-123) Two (2) sets color photos of slabbed core (CN71-114) Report/photo images on two (2) CD's





# **COMMON ABBREVIATIONS**

		`			
	A1		0 (1)		F: (1)
abnt	Abundant	C	Coarse (ly)	f	Fine (ly)
abv	Abbreviations	calc	Calcite (areous)	fau	Fauna
Alg	Algae (al)	carb	Carbonaceous	Fe	Iron-Ferruginous
alt	Altered (ing)	cbl	Cobble (64-256 mm)	Fe-mag	Feromagnesian
amor	Amorphous	Ceph	Cephalopod	fenst	Fenestral
Amph	Amphipora	cgl	Conglomerate	fis	Fissile
ang	Angular	chk	Chalk (y)	fl	Fill (ed)
anhy	Anhydrite (ic)	chlor	Chlorite	fld	Feldspar (thic)
app	Appear	cht	Chert	flk	Flake
apr	Apparent	chty	Cherty	flky	Flaky
aprox	Approximate (ly)	cl	Clastic	flor	Fluorescence
arg	Argillaceous	cln	Clean	flt	Fault (ed)
ark	Arkose (ic)	clr	Clear	fltg	Floating
asph	Asphalt (ic)	cly	Clay (ey)	foram	Foraminifera
AST	Assigned similar to	com	Common	fos	Fossil (iferous)
	(no actual sample taken)	coq	Coquina	fr	Fair
apha	Aphanitic	Cor	Coral	frac	Fracture (ed)
		crbnt	Carbonate	frag	Fragment (al)
bcm	Become (ing)	Crin	Crinoid (al)	fri	Friable
bd	Bed	crm	Cream	frmwk	Framework
bdd	Bedded	crpxl	Cryptocrystalline	fros	Frosted
bdg	Bedding	ctc	Contact		
Belm	Belemnites			g	Good
bent	Bentonite (ic)	deb	Debris	g Gast	Gastropod
bf	Buff	decr	Decrease (ing)	gl	Glass (y)
biocl	Bioclastic	desi	Desiccation	glau	Glauconite (ic)
bioturb	Bioturbated	dism	Disseminated	gn	Green
bit	Bitumen (inous)	dk	Dark (er)	gr	Grain (ed)
bl	Blue (ish)	dns	Dense (er)	gran	Granular
blk	Black	dol	Dolomite (ic)	grd	Grade (ed)
blky	Blocky	drsy	Drusy	grnl	Granule (2-4 mm)
bnd	Band (ed)	dtrl	Detrital (us)	gy	Grey
Brac	Brachiopod			gyp	Gypsum (iferous)
brec	Breccia (ted)	elg	Elongate		, ,
bri	Bright	euhed	Euhedral		
brit	Brittle				
brn	Brown				
Bry	Bryozoa				
Bulb	Bulbous				
la	Dal				

bur

Burrowed

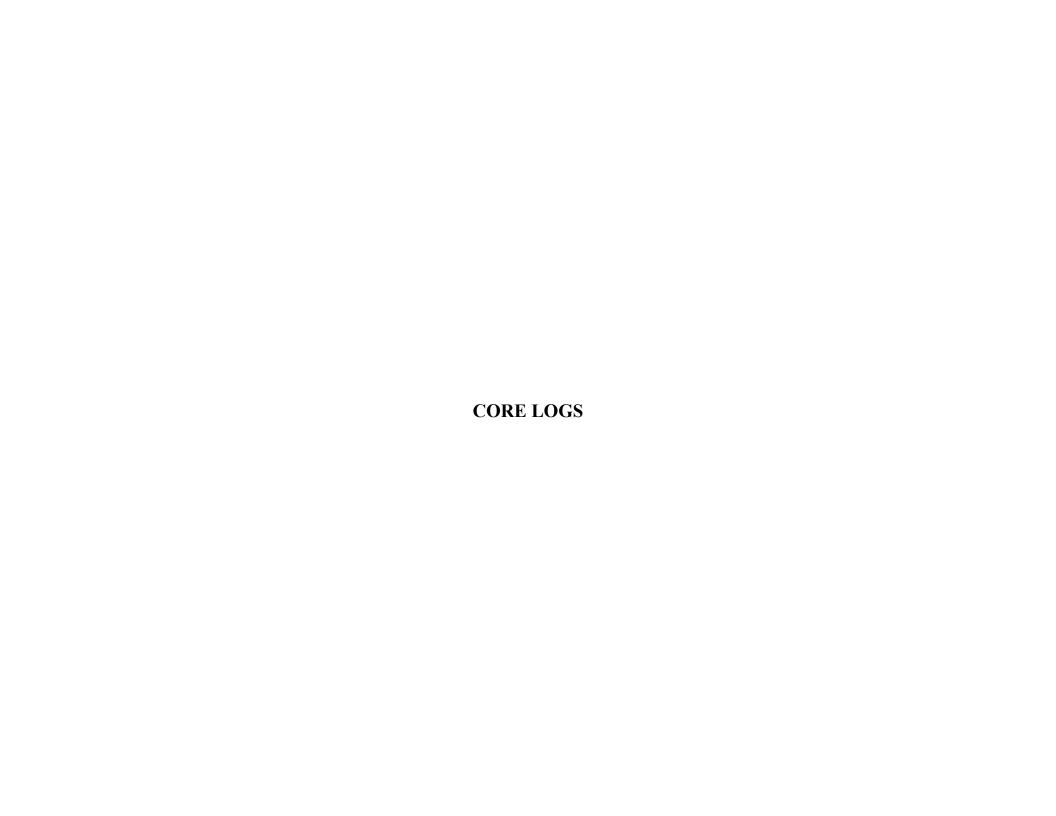
# **COMMON ABBREVIATIONS (CONTINUED)**

hal	Halite	m	Medium	pk	Pink
hd	Hard	mar	Maroon	plag	Plagioclase
hfrac	Horizontal Fracture	mas	Massive	plcy	Pelecypod
hi	High	mat	Material, matter	pl	Plant
hrtl	Horizontal	mica	Mica (ceous)	plty	Platy
hvy	Heavy	mic	Micro	por	Porous (sity)
hydc	Hydrocarbon	mky	Milky	pos	Possible (ility)
,	.,,	mnr	Minor	p-p	Pin-Point
ig	Igneous	mnrl	Mineral (ized)	pred	Predominant (ly)
imbed	Imbedded	mnut	Minute	prim	Primary
imp	Impression	Mol	Mollusca	prob	Probable (ly)
incl	Included (sion)	mot	Mottled	prom	Prominent (ly)
incr	Increase	mrly	Marly	pt	Part (ly)
indst	Indistinct	mtx	Matrix	ptch	Patch (es)
intbd	Interbedded			ptg	Parting
intcl	Intraclast (s)	n	No,none,non	purp	Purple
intfrag	Interfragmental	nod	Nodule	pyr	Pyrite (ic) (ized)
intgran	Intergranular	num	Numerous	pyrbit	Pyrobitumen
intlam	Interlaminated			1 3	,
intr	Intrusion (ive)	0	Oil	qtz	Quartz
intv	Interval	occ	Occasional	qtzc	Quartzitic
intxl	Intercrystalline	od	Odor	qtzs	Quartzose
ireg	Irregular	ool	Oolite (ic)	•	
ird	Iridescent	ор	Opaque ´	rd	Round (ed)
intrsk	Intraskeletal	org	Organic	repl	Replaced (ing) (ment)
		orng	Orange	rexl	Recrystallized
kao	Kaolin	orth	Orthoclase	rmn	Remains (nant)
		Ost	Ostracod	rr	Rare
lam	Laminated	ovgth	Overgrowth	rsns	Resinous
Ichd	Leached	ox	Oxidized	rthy	Earthy
len	Lentil (cular)			-	•
lith	Lithographic	р	Preliminary (as suffix)	S	Small
lmy	Limy	pbl	Pebble (4-64 mm)	sa	Salt (y)
Irg	Large (er)	pel	Pellet	S	Sulphur
Is	Limestone	perm	permeability	s&p	Salt & Pepper
lse	Loose	pet .	Petroleum (iferous)	sat	Saturated
Istr	Lustre	phos	Phosphate (ic)	sb	Sub
lt	Light (er)				

# **COMMON ABBREVIATIONS (CONTINUED)**

	0.1		<b>-</b>
SC	Scales	tab	Tabular
scat	Scattered	tex	Texture
sd	Sand (1/16 - 2mm)	Tham	Thamnopora
sdy	Sandy	thk	Thick
sec	Secondary	thn	Thin
sed	Sediment (ary)	thru	Throughout
sft	Soft	tr	Trace
sh	Shale	trnsl	Translucent
shad	Shadow	trnsp	Transparent
shy	Shaly	tt	Tight
sid	Siderite (ic)	tub	Tubular
sil	Silica		
sks	Slickensided	uncons	Unconsolidated
sl	Slight (ly)	unident	Unidentifiable
sln	Solution	up	Upper
slt	Silt		
sltst	Siltstone	V	Very
slty	Silty	var	Variable
sm	Smooth	vcol	Varicolored
SP	Small Plug (as prefix)	vfrac	Vertical Fracture
sp	Spot (ted) (ty)	vgt	Varigated
spec	Speck (led)	vn	Vein
spl	Sample	∨rtl	Vertical
srt	Sort (ed) (ing)	vug	Vug (gy) (ular)
strg	Stringer		
Strom	Stromatoporoid	W	Well
stromlt	Stromatolite	wh	White
struc	Structure	wk	Weak
styl	Stylolite (ic)	wthrd	Weathered
suc	Sucrosic	wtr	Water
sug	Sugary	wvy	Wavy
sup	Supported	wxy	Waxy
surf	Surface	wsrt	Well sorted
SZ	Size		

xbd xbdg xl xlam	Cross-bedded Cross-bedding Crystal (line) Cross-laminated
yel	Yellow
zn	Zone
* / >10000 <0.01 CC DR LC RU mD	Broken core With Permeability over 10000 mD Permeability less than 0.01 mD Cracked Core Drilled Lost Core Rubble milliDarcy



WELL: SUNCOR OB LEWIS

FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

JOB: RC31252 DEPTH SCALE 1: 240



DRLG. FLD. : WATER BASE MUD ELEVATION : KB:

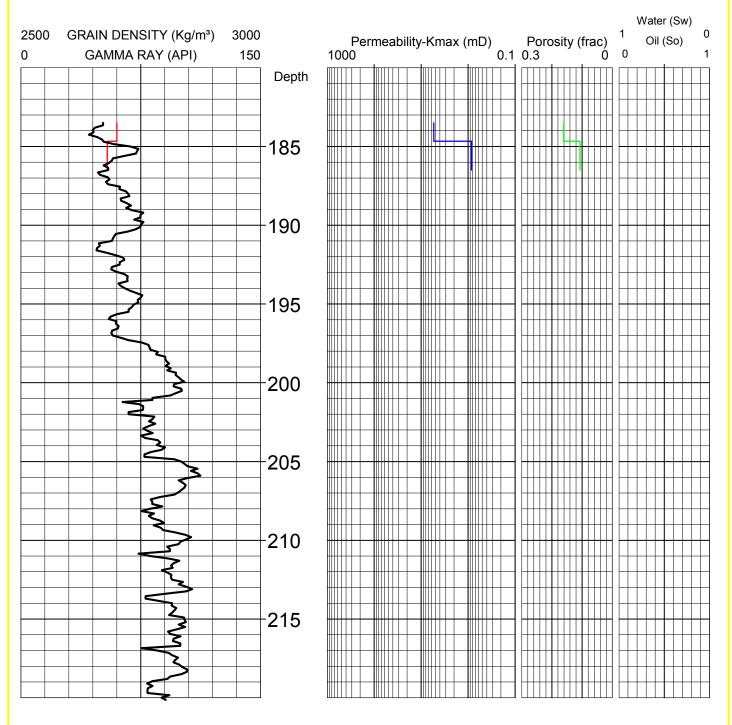
RECOVERY: 234.15m

CORED INTERVAL: 183.50-425.00m

GRD:

DATE: 17-Mar-2015

# CORE LOG



CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

JOB: RC31252 DEPTH SCALE 1:240

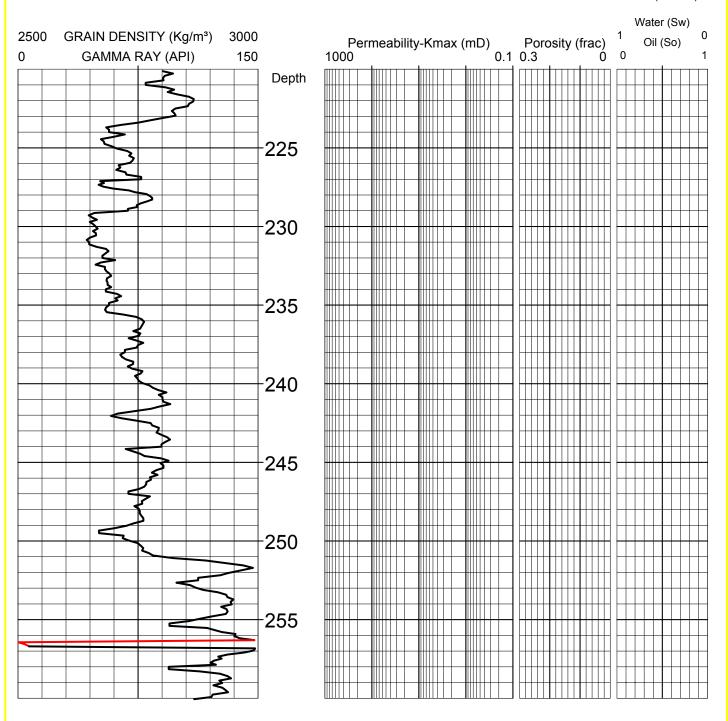


**ELEVATION: KB:** GRD:

RECOVERY: 234.15m

DATE: 17-Mar-2015

# CORE LOG



RECOVERY: 234.15m CORED INTERVAL: 183.50-425.00m **WELL: SUNCOR OB LEWIS** DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

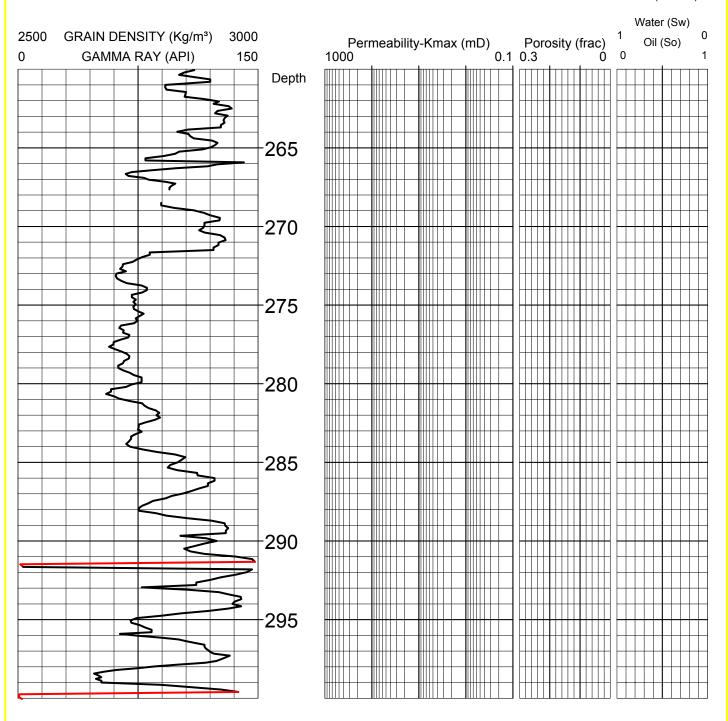
FIELD:

JOB: RC31252 DEPTH SCALE 1:240 AGAT<sup>®</sup>Laboratories



DATE: 17-Mar-2015

# CORE LOG



RECOVERY: 234.15m CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

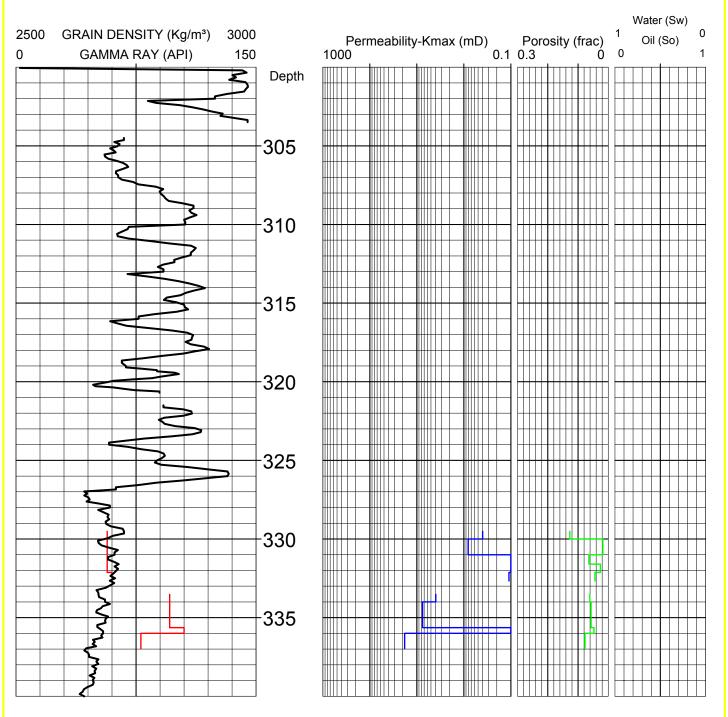
FIELD:

JOB: RC31252 DEPTH SCALE 1:240 **AGAT** Laboratories

**ELEVATION: KB:** GRD:

DATE: 17-Mar-2015

# CORE LOG



WELL: SUNCOR OB LEWIS

FORMATION : SHELL LAKE MEMBER/KEG RIVER

FIELD:

JOB: RC31252 DEPTH SCALE 1: 240 AGAT<sup>®</sup>Laboratories

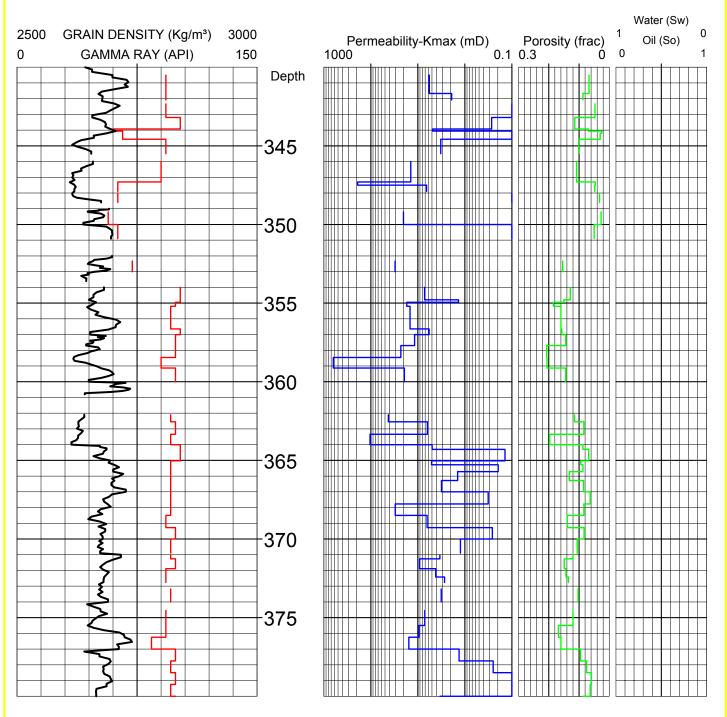
DRLG. FLD. : WATER BASE MUD ELEVATION : KB: GRD :

RECOVERY: 234.15m

CORED INTERVAL: 183.50-425.00m

DATE: 17-Mar-2015

#### CORE LOG



CORED INTERVAL: 183.50-425.00m **WELL: SUNCOR OB LEWIS** DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

JOB: RC31252 DEPTH SCALE 1:240

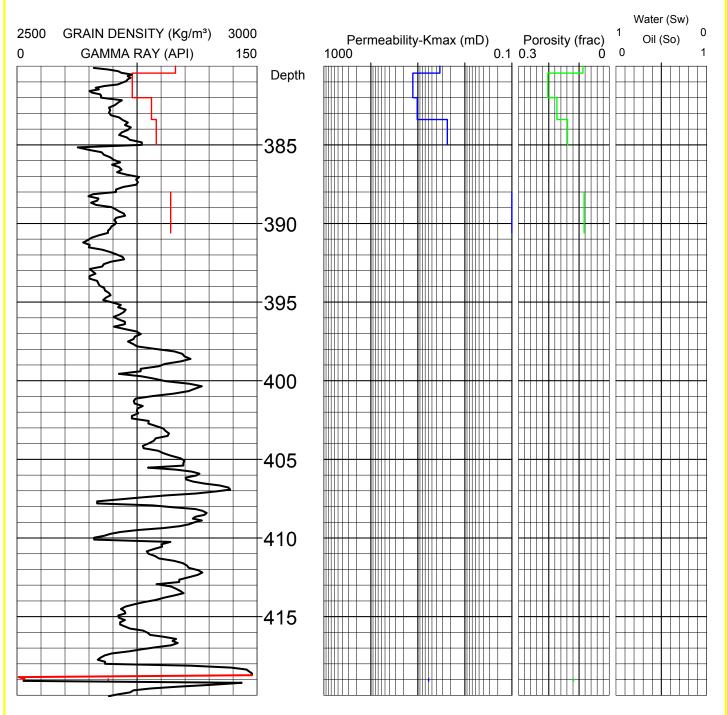


**ELEVATION: KB:** GRD:

RECOVERY: 234.15m

DATE: 17-Mar-2015

# CORE LOG



CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

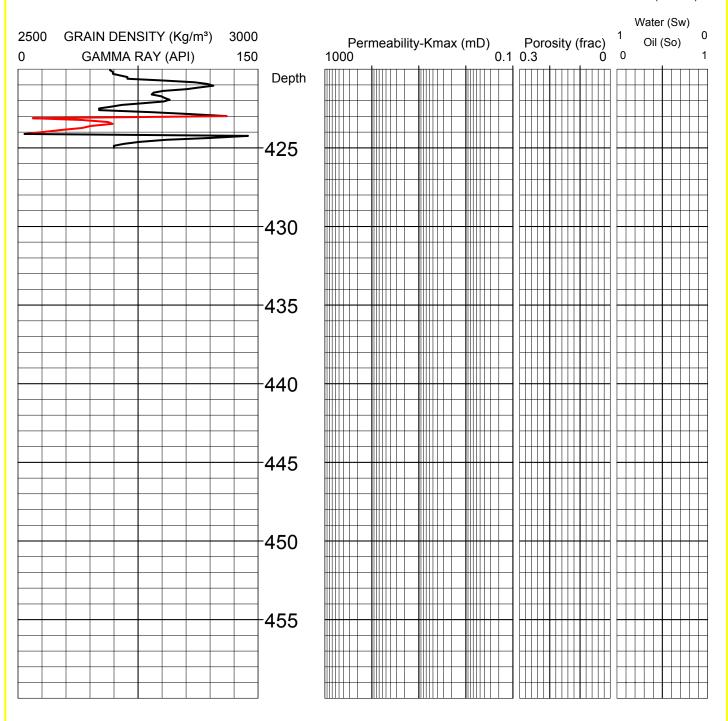
JOB: RC31252 DEPTH SCALE 1:240 **AGAT** Laboratories

**ELEVATION: KB:** GRD:

RECOVERY: 234.15m

DATE: 17-Mar-2015

# CORE LOG

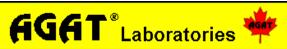


CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

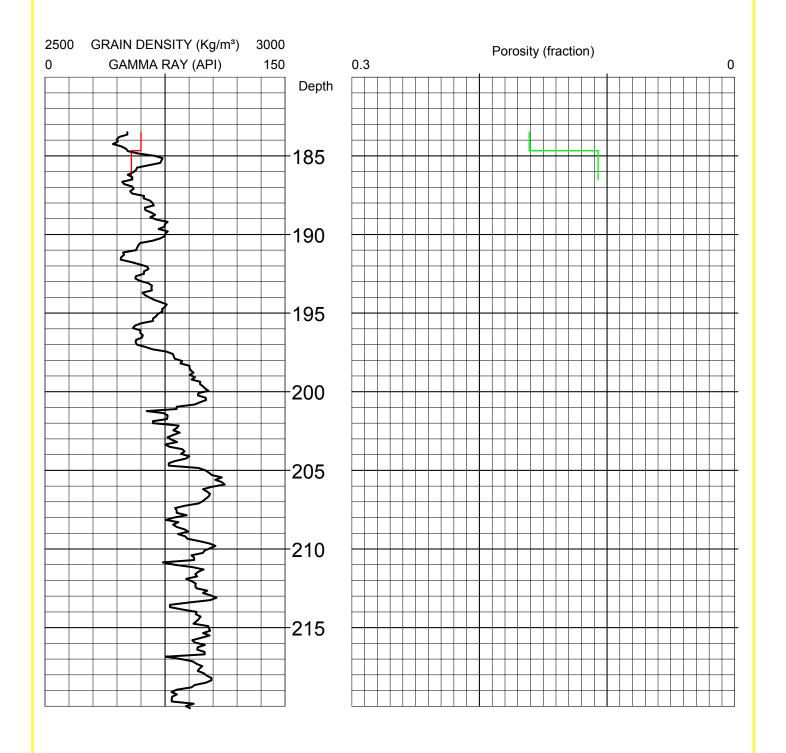
JOB: RC31252 DEPTH SCALE 1:240



**ELEVATION: KB:** GRD:

RECOVERY: 234.15m

DATE: 17-Mar-2015



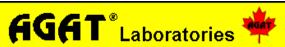
RECOVERY: 234.15m CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

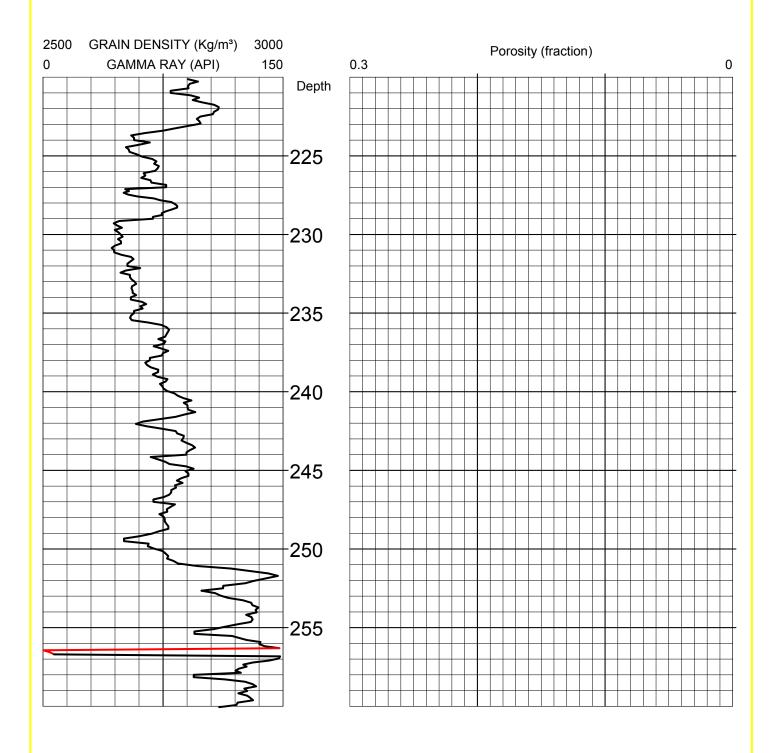
JOB: RC31252

DEPTH SCALE 1:240



**ELEVATION: KB:** GRD:

DATE: 17-Mar-2015



RECOVERY: 234.15m CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

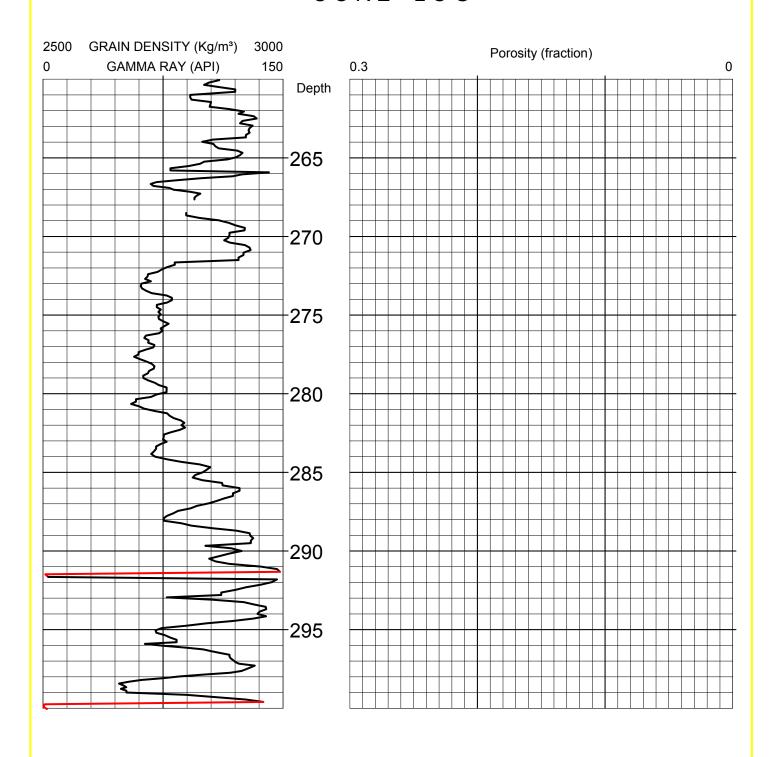
JOB: RC31252

DEPTH SCALE 1:240



**ELEVATION: KB:** GRD:

DATE: 17-Mar-2015



RECOVERY: 234.15m CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

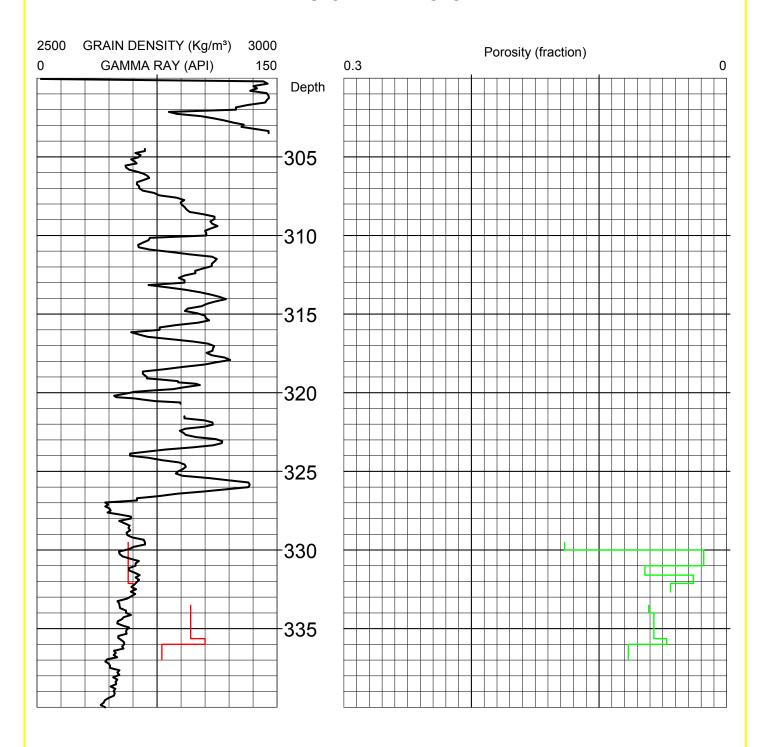
FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

JOB: RC31252 DEPTH SCALE 1:240 **AGAT**<sup>®</sup>Laboratories

**ELEVATION: KB:** GRD:

DATE: 17-Mar-2015



CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

FIELD:

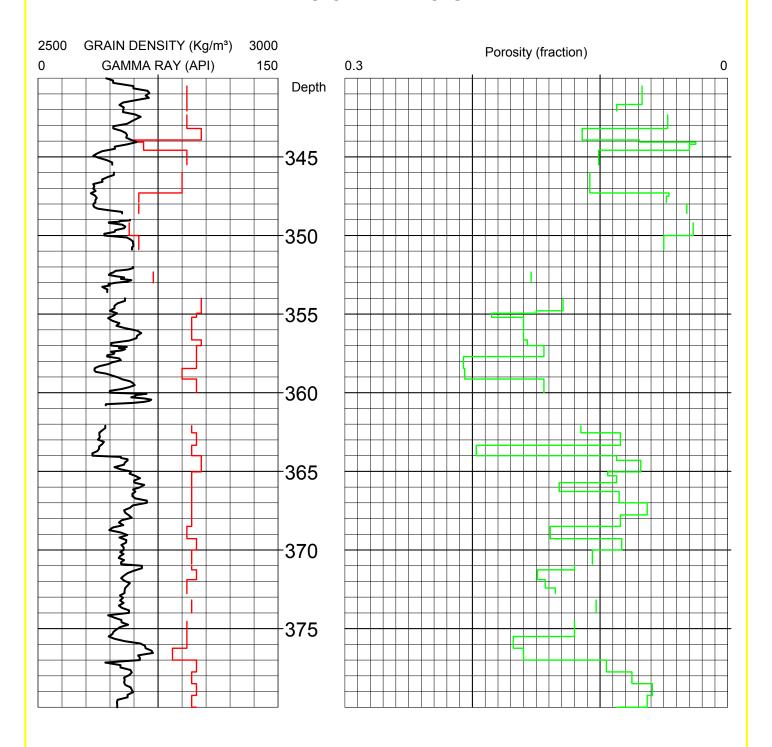
JOB: RC31252 DEPTH SCALE 1:240



**ELEVATION: KB:** GRD:

RECOVERY: 234.15m

DATE: 17-Mar-2015



RECOVERY: 234.15m CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

FORMATION: SHELL LAKE MEMBER/KEG RIVER

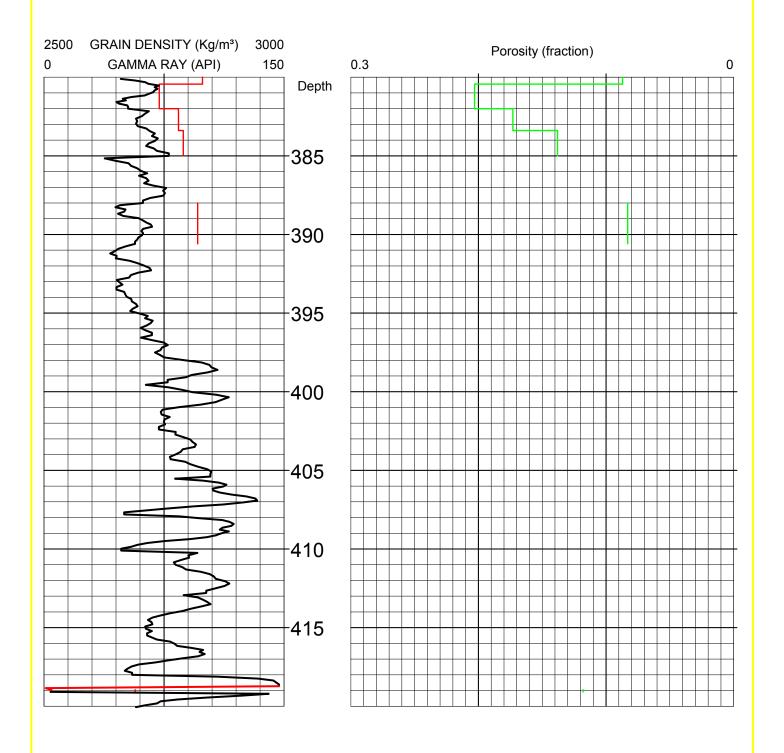
FIELD:

JOB: RC31252 DEPTH SCALE 1:240



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CORED INTERVAL: 183.50-425.00m WELL: SUNCOR OB LEWIS DRLG. FLD.: WATER BASE MUD

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