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ELK VALLEY COAL CORPORATION FORDING RIVER OPERATIONS

TITLES DIVISION, MINERAL TITLES VICTORIA, BC
JUL 0 7 2008
FILE NO.
FILE NO

June 30, 2008

Mineral Titles Ministry of Energy, Mines & Petroleum Resources 6th Floor, 1810 Blanshard Street PO Box 9326 Stn Prov Govt Victoria, BC V8W 9N3

ATTN: Mrs. Kim Stone. Coal Administrator

Dear Mrs. Stone:

Please find enclosed one copy of the report entitled "Summary Report – 2007 Exploration Program."

I trust this submission will fulfill the requirements under the Coal Act and Coal Act Regulations.

Yours truly,

Barry/Musil, P. Geo. Senior Geologist Telephone (250) 865-5169 Facsimile (250) 865-5165

Enclosure



Fording River Operations

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Summary Report

2007 Exploration Program

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Statements of Author's Academic and Professional Qualifications

CERTIFICATE OF QUALIFIED PERSON

Name: Barry Musil, P.Geo.

Company: Elk Valley Coal Corporation

Address: Fording River Operations P.O. Box 100 Elkford, BC VOB IHO Phone: (250)865-5169

I, Barry Musil, P.Geo, am employed as a Senior Geologist, Supervisor at Fording River Operations. This certificate applies to the report titled "Summary Report, 2007 Exploration Program". I graduated from the University of British Columbia with a Bachelor of Science Degree in Geology, 1984. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (# 19361). Since 1986 I have been involved with coal mining projects at Fording River Operations. As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

Barry F. Musil, P.Geo. tryphi



SCHEDULE C

PROVINCE OF BRITISH COLUMBIA	MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES	TITLE PAGE OF ASSESSMENT REPORT
GENERAL NATURE OF	WORK	TOTAL COST
Exploration		\$1,932,000.00
Author of Landsman	Signature	(s) hyphin
B. Musil (P. Geo.)		
Date Report Filed	30/08 Year of	Work <u>2007</u>
Property Name Fo	ording River Operations	
Coal Type (if applicable) Medium to High Volatil	e Bituminous
Mining Division <u>Fo</u>	e <u>rt Steele</u> Longitude Latitude	114º 52' 50º12'
Coal Licence Numbers;	Coal Leases; Freehold BC	Coal Lease #16 Lot #4588
		Coal Licences #327990, 327991 327993 327996
Owner (s) (1) Elk Valley Coal Corp PO Box 100, Elkford	ooration d, BC, V0b 1H0	
Operator (s) (a) Same		
References to Previous Annual Assessment Re	Work ports Since 1970	

Fording River Operations Summary Report <u>2007 Exploration Program</u>

I. Introduction

1. General Geography and History

The Fording River Coal property is located in the Fording River and Upper Elk Valleys, approximately 25 kilometres north of Elkford, BC. Access is by paved road north from Elkford along the Fording River Valley, or north along the Elk River Valley via the Forestry Service gravel road or the Kan-Elk Powerline road.

The Fording River minesite is situated within the front range of the southern Canadian Rocky Mountains. At least ten major coal seams, generally greater than four metres thick, are contained in the Mist Mountain Formation of the Kootenay Group.

The Elk River portion of the property was actively explored by the Canadian Pacific Railway Company in the period 1902-1908. Until 1947, the property was comprised of 10,276 hectares in 40 Crown Granted Lots. In that year, the holdings were reduced to 2,979 hectares in 15 Crown Granted Lots. In 1967 and 1968, Canadian Pacific Oil and Gas reacquired part of the coal lands which had been abandoned in 1947. An additional nine Coal Licences located at the south end of the property were acquired in 2001. At the present time, the Fording River Property consists of 22,635 hectares, held on seven Coal Leases, 9 Coal Licences, and 15 Crown Granted Lots.

Mining operations, which commenced in 1971, have produced more than 197.8 million tonnes of clean metallurgical and thermal coal for markets in North and South America, Africa, Europe, and Asia.

Reference:

i) Illustration No. 1A: Index Map - Coal Properties

2. Geology

i) Stratigraphy

The general stratigraphic succession on the Fording River Property is summarized in the following table:

Period		Lit	tho	Stratigraphic Units	Principal Rock Types				
Recent					Colluvium				
Quatemary					Clay, silt, sand, gravel, cobbles				
Lower Cretaceous			В	lairmore Group	Massive bedded sandstones and				
					conglomerates				
				Elk Formation	Sandstone, siltstone, shale, mudstones,				
	к				chert pebble conglomerate, minor coal				
	0	Γ	Mis	t Mountain Formation	Sandstone, siltstone, shale, mudstones,				
	0				thick coal seams				
	Т			Moose Mountain	Medium to coarse-grained quartz-chert				
Lower	E	м	F	Member	sandstone				
Cretaceous	N	0	0						
to	A	R	R						
Upper	Y	R	м						
Jurassic		11	Α	Weary Ridge	Fine to coarse-grained, slight ferruginous				
	G	s	Т	Member	quartz-chert sandstone				
	R	s							
	0	E	0						
	υ	Y	Ν						
	P								
Jurassic			Fe	ernie Formation	Shale, siltstone, fine-grained sandstone				
Triassic		S	Spra	y River Formation	Sandy shale, shale quartzite				
		Roc	:ky	Mountain Formation	Quartzite				
Mississippian				Rundle Group	Limestone				

Table 1 - Fording River Stratigraphy

The oldest rocks present on the Fording River property are the Rundle Group limestones, located on the west bank of the Fording River, near the southern property boundary. They are in faulted contact with the Kootenay Group to the west, and unconformable contact with Rocky Mountain Formation quartzites to the north. The latter are best exposed on the eastern slope of the Brownie Creek valley. The Fernie Formation shales occur throughout the area, generally along the sides of the valleys on the lower flanks of the mountains. The shales are recessive and, therefore, poorly exposed. The Fernie Formation is in conformable contact with the Morrissey, through the "Passage Beds," which are a transitional zone from marine to non-marine sedimentation.

The Morrissey Formation, which is the "basal sandstone" of the Kootenay Group, is a prominent cliff-forming marker horizon in many locations. On the Fording River property, the top of the Moose Mountain member (Morrissey Formation) is in sharp contact with #1 or A seam, the lowermost bed of the Mist Mountain Formation.

The Mist Mountain Formation contains all of the economic coal seams, and is the most widely occurring formation on the Fording River property. This economically important formation is an interbedded sequence of sandstones, siltstones, silty shales, mudstones, and medium to high volatile bituminous coal seams. The volatile content of the coal increases up section, with decreasing rank. Lenticular sandstones comprise about 1/3 of the Mist Mountain sediments at Fording River, but very few laterally extensive sandstone beds exist.

The sandstone above and below seam #4 (B) and above #9(F), are the most persistent units, and are often cliff-forming marker horizons.

The Mist Mountain Formation is generally overlain conformably by strata of the Elk Formation. On the Fording property, this formation is commonly a succession of sandstones, siltstones, shales, mudstones, chert pebble conglomerates, and sporadic, thin, high volatile bituminous coal seams. The coal seams are characterized by a high alginate content and referred to as "Needle" coal. The Elk Formation is observed near the tops of the mountains, mainly on the east side of the Elk Valley on the Greenhills Range, and northward to the Mount Tuxford areas.

The top of the Elk Formation marks the upper boundary of the Kootenay Group, which is uncomformably overlain by the basal member of the Blairmore Group. This thick bedded, cliff-forming sandstone and conglomerate unit is observed on the upper slopes of Mount Tuxford.

ii) Structure

Subsequent to deposition, the sediments were involved in the mountain building movements of the late Cretaceous to early Tertiary Laramide orogeny. The major structural features of the Fording River property are the north-south trending synclines with near horizontal to steep westerly dipping thrust faults, and a few high angle normal faults. Some of the thrust faults were probably folded late in the tectonic cycle.

The formation of the major fold structures began early in the tectonic cycle. In the current mining area, two asymmetric synclines are evident: the Greenhills Syncline to the west, and the Alexander Creek Synclines to the east of the Fording River.

The thrust faulting (ie: the Ewin Pass and Brownie Ridge Thrusts), was probably contemporaneous with the later stages of folding. The intervening anticline was subsequently faulted (Ericson Fault), then eroded.

The Alexander Creek Syncline can be traced from the southern property boundary on Castle Mountain to the northern end of the property on Weary Ridge. The strata of the west limb, on the west face of Eagle Mountain, dip easterly at 20 to 25° , decreasing gradually to zero as the axis is approached. The east limb, however, attains a 20° westerly dip within a much shorter (500m) distance of the axis. This asymmetry is possibly due, at least in part, to the influence of the Ewin Pass Thrust which subcrops 600 to 800 metres east of the synclincal axis.

Further to the east, on Brownie Ridge, the strata dip westerly at a mean dip of 42⁰. The Brownie Ridge Thrust, which subcrops near the crest of the ridge, probably contributes to this steepening.

Within the mining area, the axis of the Alexander Creek Syncline plunges to the north at an average of 4⁰. Turnbull Mountain exhibits a localized series of an echelon fold structure, plunging both to the north and to the south. These subsidiary folds may be

related to thrust faulting. From the south end of Mount Tuxford, the synclinal axis continues north-northwest along the base of Mount Veits and into the Elk River Valley near Aldridge Creek.

On Mount Tuxford, the beds exposed are those of the Elk Formation and the overlying (non-coal bearing) Cadomin Formation. The area has not been extensively explored. The stratigraphic sequence of the east limb, in the more extensively explored Mist Mountain strata near Aldridge Creek (Elco property), closely resembles the east limb strata found on Henretta Ridge, ten kilometers to the south.

On the northwest corner of Eagle Mountain, the lower Kootenay-upper Fernie section is the locus for a zone of near horizontal thrust faulting. The effect is to cause a double repetition of the lower coal seams and basal sandstone on the west synclinal limb. This fault zone is synclinal in form, and continuous with the Ewin Pass Thrust zone found in the east limb.

The Greenhills Syncline in the mining area is essentially a "mirror-image" of the Alexander Creek structure. The east limb of the asymmetric syncline dips westerly at 15 to 25° , except in areas near the Ericson Fault, where 45 to 55° dips are common. The west limb exhibits much steeper dips, commonly in the 35 to 45° range. The Greenhills Syncline plunges northward (340 to 350°), at less than 5° , and then apparently dies out to the north in the area of the Osborne Creek Depression.

The Ericson Fault, which locally runs along the base of the Greenhills Range, west of the Fording River, is one of the major regional faults. From south to north, this westerly dipping (40 to 70°) normal fault, brings Mist Mountain strata progressively into contact with Rundle, Rock Mountain, Spray River, Fernie, and Morrissey strata. The downthrown block is to the west.

Near the south end of Lake Mountain, the Ericson Faults begins to "splay" into two zones. The main fault runs along the eastern margin of Lake Mountain, and the subsidiary fault runs to the west and appears to "die out" northward. The steep northward dip exhibited in the Lake Mountain strata could be due to influence from

these flanking "splays" of the fault. The flat lying region to the north of Lake Mountain (Osborne Creek Depression area) is completely void of outcrop, and the Ericson Fault has not been traced either through or to the north of this area.

Reference:

i) Illustration No. 1B: General Geology Map

3. Summary of Work Done in 2007

48 reverse circulation drill holes were completed for a total of 16,106 metres. Geological field mapping was conducted by staff geologists on Bare and Castle Mountains.

Rotary drilling was done by SDS Drilling using three Ingersol Rand TH100 truck mounted rigs.

All holes were geophysically logged through the rods using the gamma-neutron method. Holes that remained open after the rods were pulled were logged for down hole deviation, and for gamma-density. Logging was done by Century Geophysical Corporation.

Coal seams encountered by rotary drilling were sampled in 0.5m intervals. Representative composite samples for each coal seam encountered in the hole were prepared at Fording's Process Plant Laboratory. Each seam composite was tested for proximate analysis, % Sulphur, and Free Swelling Index. Samples from selected seam composites were sent to David E. Pearson and associates for petrographic analysis.

Fording staff laid out the access roads and drillsite locations. Pre-logging was done by Trucut Logging. Road and drillsite construction was done by Tiegen Contractors Inc. Staff Surveyors provided the required survey control and drillhole pickups.

The following table shows the drillhole locations with respect to Coal Lease and Licence boundaries:

Table 2 -	Drillhole	Locations
-----------	-----------	-----------

Lease/Licence	Drillholes
L4588 (freehold)	RH # 2973, 2975, 2977
BC Coal Lease #16	RH # 2923, 2932-2934, 2936, 2940, 2943, 2947, 2949, 2952, 2955, 2957, 2959, 2960, 2962, 2963, 2965, 2966, 3039, 3040, 3042-3047
Coal Licence #327990 Coal Licence #327991 Coal Licence #327993 Coal Licence #327996	RH # 2998-3000 RH # 2968, 2972, 2974, 2976, 2979 RH # 2988-2997 RH # 2987

Reference:

- -

i) Illustration No. 2A: 2007 Completed Exploration – Castle and Bare Mountains

II. Individual Area Programs

1. Castle Mountain

i) Objective

A recent economic evaluation of the mining potential on the southwest flank of Castle Mountain indicated a good potential for large scale mining in this area. Prior to 2007, approximately 50% of the project area had been drilled to a density sufficient for inclusion in reserves.

The objective of the 2007 drilling and field mapping program was to provide additional seam location, thickness, and quality data at a density sufficient to upgrade this area to reserves status. This can be accomplished in two to four years, depending on the size of subsequent programs.

ii) Summary of Work Done

34 reverse circulation rotary drillholes were completed in 2007 for a total of 11,572 metres. Most seam exposures on all new access roads were mapped and selected exposures were sampled and analyzed for Romax. (Mapping will be completed by summer 2008)

All holes were geophysically logged through drill rods using the gamma-neutron method. Holes that remained open after the drill rods were pulled, were open hole logged for gamma-density and hole deviation.

iii) Results and Conclusions

The 2007 drilling and field mapping program concentrated on the north, and central to southern portions of Castle Mountain. The northern area is distinct from the central and southern areas, which blend into each other.

The northern project area (146000N – 147000N) included eight drill holes and intersected the entire section from 160 seam down to 010 seam and basal sandstone. The central/southern program was an extension of the 2006 drill program, intersecting

primarily seams 140 to 054. As in previous holes seams, 140, 130, 110, 071, 070, 051, 050, and 054 are the only seams that maintain a thickness exceeding 5 metres with reasonable continuity. Seam 070 is exceptionally thick and continuous in the north central area. A drillhole density of 200m has not yet been obtained in Reserve areas. This will be a primary goal for the 2008 program.

The project area is structurally dominated by the Alexander Creek syncline; primarily the west limb. Several minor thrust faults affect the area resulting in localized repetitions of many of the coal seams. The regional Ewin Pass thrust fault forms the eastern boundary of the project area.

Results from the 2007 drilling program have been incorporated into the Castle Mountain 3D Block Model. Economic evaluation is currently underway.

2. <u>Bare Mountain</u>

i) Objective

A regional study conducted in 2000 combined with data from 32 reverse circulation rotary drillholes completed since 2001 indicates some potential for large scale open pit mining exists on Bare Mountain.

The objective of the 2007 exploration program was to provide additional seam location, thickness, and quality information required to update a 3D block model for the northern portion of Bare Mountain. The three most southerly holes drilled in 2006 did not show a southward extension of any mining potential.

ii) Summary of Work Done

14 reverse circulation rotary drillholes were completed in 2007 for a total of 4534 metres. Seam exposures on all new access roads were mapped and selected exposures were sampled and analyzed for Romax.

All holes were geophysically logged through drill rods using the gamma-neutron method. Holes that remained open after the drill rods were pulled, and were also logged for gamma-density and down hole deviation.

iii) Results and Conclusions

The 2007 drilling and field mapping program concentrated on the north and northwest portions of Bare Mountain. The area is characterized by very steep westerly dipping bedding (45 to 75 degrees) on the east limb of the Alexander Creek syncline; beneath the Ewin Pass thrust fault. Several minor thrust faults also affect the area; the eastern most of which is likely the southern extension of the Brownie Ridge thrust seen on Eagle Mountain.

The entire sequence of Mist Mountain Formation was intersected in several of the deeper holes, with Elk Formation 200m thick in RH #2849 (drilled 2006). The Mist Mountain Formation on Bare Mountain contains three dominant coal seams (#5, 7, and 11) which are consistently greater than ten meters in thickness, and often significantly thicker. The remaining seams are inconsistent but often thinner than five metres.

An economic analysis to show economic feasibility for open pit mining using 2007 costs and revenue showed Bare Mountain to be marginally not feasible. The 2007 drilling and mapping results basically confirmed previous drilling with respect to seam thickness and major structures. There were some minor differences in seam thickness and dip that may have some bearing on future economic analysis.











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http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/f reeside/10_251_2004

REMARKS 2 : ALL SERVICES PROVID	REMARKS 1	RECORDED BY B. BERINGER	WITNESSED BY SDS DRILLIN	MUD WEIGHT :1.0	MUD RES NIA	RM TEMPERATURE NIA	BOREHOLE FLUID MATER	CASING TYPE STEEL	CASING DRILLER 3	CASING LOGGER NIA	LOG BOTTOM :149.45	LOG TOP :1.84	BIT SIZE :13.00	DEPTH ORILLER :148	DATE 07/2407	DRL MEASURED FROM GL	LOG MEASURED FROM GL	PERMANENT DATUM GL	UNIQUE WELL ID. N/A	LICENCE NO. NIA	RANGE	TOWNSHIP N/A	SECTION N/A	LOCATION NUA	PROVINCE B.C.	COUNTRY	FIELD FORDING RN	WELL 2923	COMPANY ELK VALLEY ((WIRELINE SERVICES	Cermina-			
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		1,0	MUD WEIGHT	
		N/A	MUD RES	
		N/A	RM TEMPERATURE	
	2	WATER	BOREHOLE FLUID	
		STEEL	CASING TYPE	
		ω	CASING DRILLER	-
		NIA	CASING LOGGER	
		147.74	LOG BOTTOM	
		0.27	LOG TOP	•
		:13	BIT SIZE	-
		:148	DEPTH DRILLER	
	7	07/23/0	DATE	
	ELEVATION GL N/A	M GL	DRL MEASURED FRO	
	ELEVATION DF N/A	M.GL	LOG MEASURED FRO	•
	ELEVATION KB N/A	ğ	PERMANENT DATUM	
		N/A	SNIQUE WELL ID	
		N/A	LICENCE NO.	
		NIA	RANGE	
		NIA	TOWNSHIP	
		N/A	SECTION	
		N/A	LOCATION	
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		CANAD	COUNTRY	-
9067	NG RIVER OPERATIONS	FORDIN	FIELD	
9057		2923	WELL	
OTHER SERVICES:	LLEY COAL	ELK VA	COMPANY	
	S 2923		WIRELINE SEA	
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1:200 SLIM GAMMA NEUTRON 2923 07/23/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE 13 VERSION = 3.64EK



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1:200 SLIM	GAMMA NEUTRON	2923	07/23/07	
		\$		
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SAND	STONE	MATRIX DELTA T : 177	
MAGNETIC DECL: 17	ELECT. CUTOFF : 99999		BIT SIZE : 13	
PRESENTATION NAME/DATE =	9067A.0 07/04/2007		VERSION = 3.64EK	

1

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2923 07/23/07 19:10 TM VERSION 1 BER 530		<u></u>	20, 20, 20, 20, 20, 20, 20, 20, 20, 20,		
	DATE	TIME	SENSOR	STA	ANDARD	RE	SPONSE
1	Jul20,07	01:44:30	GAMMA	1.000	[API-GR]	1.00	[CPS]
	Jul20,07	01:44:30	GAMMA	250.000	[API-GR]	52.00	[CPS]
2	Sep03,06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]

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SCALE: 5 M/CM CLIENT: ELK VALLEY COAL TRUE DEPTH: 147.88 M LOCATION: FORDING RIVER OPERATIONS AZIMUTH: 314.0 HOLE ID: 2923 DATE OF LOG: 07/24/07 DISTANCE: 18.1 M + = 20 M INCR PROBE: 9057A 1067 MAG DECL: 17.0 \circ = bottom of hole N40.0M _30.0M 20.0M \mathbf{Q} 10.0M E W S

* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

 CLIENT
 : ELK VALLEY COAL
 HOLE ID.
 : 2923

 FIELD OFFICE
 : PENHOLD
 DATE OF LOG
 : 07/24/07

 DATA FROM
 : N/A
 PROBE
 : 9057A
 , 1067

 MAG. DECL.
 : 17.000
 DEPTH UNITS
 : METERS

 LOG:
 2923_07-24-07_11-05_9057A_.02_5.00_149.47_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	BANGB
5.02	5.02	0.00	-0.00	0.0	316.2	1.4	316.2
15.00	15.00	0.10	-0.20	0.2	297.2	1.8	290.6
25.00	24.99	0.06	-0.54	0.5	276.8	2.3	261.3
35.00	34.98	0.09	-0.95	1.0	275.2	3.6	317.6
45.00	44.95	0.60	-1.57	1.7	290.7	4.9	305.4
55.00	54.89	1.30	-2.38	2.7	298.7	6.9	313.5
65.00	64.81	2.05	-3.40	4.0	301.1	8.2	302.1
75.00	74.71	2.89	-4.52	5.4	302.6	9.1	311.9
85.00	84.58	3.93	-5.69	6.9	304.6	9.2	312.3
95.00	94.45	5.07	-6.88	8.5	306.4	9.5	315.2
105.00	104.31	6.29	-8.03	10.2	308.1	10.0	315.7
115.00	114.15	7.61	-9.20	11.9	309.6	9.9	318.7
125.00	123.99	8.99	-10.30	13.7	311.1	10.2	322.9
135.00	133.83	10.43	-11.40	15.4	312.5	10.7	322.9
145.00	143.65	11.91	-12.52	17.3	313.6	10.5	320.0
149.30	147.88	12.55	-13.00	18.1	314.0	11.4	322.2

Building Image: Second Sec	COMPENSATED DENSITY GAMMA-CALIPER-RES 2932
I:200 COMPENSATED DENSITY 2932 07/22/07 LOG PARAMETERS LOG PARAMETERS MATRIX DENSITY: 2.65 NEUTRON MATRIX: SANDSTONE MATRIX DELTA T MAGNETIC DECL: 17 ELECT. CUTOFF 99999 BIT SIZE PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007 VERSION = 3.84 CALIPERL METERS RES(SG) 0 OHM-M GAMMA DEN(CDL) 0 G/CC 0	: 177
LOG PARAMETERS MATRIX DENSITY : 2.65 NEUTRON MATRIX : SANDSTONE MATRIX DELTA T MAGNETIC DECL : 17 ELECT. CUTOFF : 99999 BIT SIZE PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007 VERSION = 3.64 CALIPERL METERS RES(SG) 3 CM 17 0 OHM-M GAMMA DEN(CDL) 1 G/CC	: 177
CALIPERL METERS RES(SG) -3 CM 17 GAMMA OHM-M DEN(CDL) 1 G/CC	13 5K
3 CM 17 0 OHM-M GAMMA DEN(CDL) DEN(CDL) 1 G/CC	
D API-GR 140 0 API-GR 140 0 G/CC	3000
	· • • • • • • • • • • • • • • • • • • •
	3
╺┥┥╞╎┫ ╶╺╺┝┶ <u>┟</u> ┼┽╂┼┼╂┼┟┨	
<mark>┟╱┼╶┼╾╀[╤]┼╶┼╶╎<mark>╢╶╗╍╦╧┟╵</mark>╎╶┼╶┟_{╱┿╍╋╍}┽╶┥┥┥┥┥┥</mark>	



Penti		SLIM GAMMA-NEUTRON
WIRELINE SER	(ICES	2932
COMPANY	ELK VALLE	r coal
WELL	2932	OTHER SERVICES
FIELD	FORDING	
COUNTRY	CANADA	AC76
PROVINCE	ALBERTA	
LOCATION	N/A	
SECTION	N/A	
TOWNSHIP	N/A	
RANGE	N/A	
LICENCE NO.	NIA	
UNIQUE WELL ID.	N/A	
PERMANENT DATUM	Ξ	ELEVATION KB N/A
LOG MEASURED FROM	Migl	ELEVATION DF N/A
DRL MEASURED FROM	M :GL	ELEVATION GL N/A
DATE	07/22/07	
DEPTH DRILLER	237	
BIT SIZE	:13	
LOG TOP	:0.33	
LOG BOTTOM	231.87	
CASING LOGGER	N/A	
CASING DRILLER	ε	
CASING TYPE	NIA	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	NIA	
MUD RES	NIA	
MUD WEIGHT	1.0	
WITNESSED BY	SDS DRILLI	NG
RECORDED BY	B. BERINGE	72
REMARKS 1		
REMARKS 2		
ALL SEF	RVICES PROV	IDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2932 07/22/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK



	METERS	NEUTRON
		500 API-N 1700
GAMMA		NEUTRON
0 API-GR 1		0 API-N 500
	-	
	_	
	10	
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	20	
	20	
3		
	-	
	-30	





1:200 SLIM GAMMA NEUTRON 2932 07/22/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13 VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2932 07/22/0 TM VERSION 1 BER 530	07 05:52				
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1	Jul20,07	01:44:30	GAMMA	1.000	(API-GR)	1.00	[CPS]
	Jul20,07	01:44:30	GAMMA	250.000	(API-GR)	52.00	[CPS]
2	Sep03,06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]



* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	:	ELK VALLEY COAL	HOLE ID.	:	2932
FIELD OFFICE	:	PENHOLD	DATE OF LOG	:	07/22/07
DATA FROM	;	N/A	PROBE	:	9057 A , 1067

MAG. DECL. : 17.000 DEPTH UNITS : METERS LOG: 2932_07-22-07_13-58_9057A_.02_7.04_233.69_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	az imuth	SANG	Sange
10.00	10.00	0.04	0.03	0.0	42.8	2.2	40.1
20.00	19.99	0.37	0.32	0.5	40.3	2.6	34.5
30.00	29.98	0.75	0.58	0.9	37.9	3.0	28.8
40.00	39.97	1.17	0.84	1.4	35.7	3.0	28.1
50.00	49.95	1.64	1.10	2.0	33.7	3.3	21.3
60.00	59.94	2.18	1.28	2.5	30.4	3.3	5.4
70.00	69.91	2.82	1.39	3.1	26.2	3.8	6.1
80.00	79.89	3.55	1.41	3.8	21.7	4.5	347.2
90.00	89.85	4.38	1.33	4.6	16.9	5.0	353.3
100.00	99.81	5.29	1.22	5.4	13.0	5.7	356.5
110.00	109.76	6.28	1.11	6.4	10.0	5.7	351.3
120.00	119.71	7.24	0.99	7.3	7.8	5.4	354.6
130.00	129.67	8.20	0.88	8.2	6.1	5.4	354.4
140.00	139.62	9.14	0.77	9.2	4.8	5.4	355.6
150.00	149.57	10.11	0.70	10.1	4.0	5.9	2.6
160.00	159.51	11.20	0.72	11.2	3.7	6.5	4.4
170.00	169.44	12.35	0.89	12.4	4.1	6.9	11.0
180.00	179.37	13.51	1.15	13.6	4.9	7.2	14.6
190.00	189.30	14.67	1.46	14.7	5.7	6.8	14.4
200.00	199.22	15.91	1.78	16.0	6.4	7.9	16.0
210.00	209.12	17.26	2.16	17.4	7.1	8.3	16.3
220.00	219.02	18.62	2.51	18.8	7.7	7.8	359.4
230.00	228.93	19.90	2.66	20.1	7.6	8.2	15.1
233.52	232.42	20.36	2.80	20.6	7.8	8.2	14.0



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	GER	B. BERIN	RECORDED BY
	LLING	SDS DRI	WITNESSED BY
		:1.0	MUD WEIGHT
		N/A	MUD RES
		N/A	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		NIA	CASING TYPE
		i)	CASING DRILLER
		NIA	CASING LOGGER
		:195.74	LOG BOTTOM
		10.29	LOG TOP
		:13	BIT SIZE
,		:198	DEPTH DRILLER
		07/23/07	DATE
	ELEVATION GL NIA	N GL	DRL MEASURED FROM
	ELEVATION DF N/A	MIGL	LOG MEASURED FROM
	ELEVATION KB N/A	ĞL	PERMANENT DATUM
		N/A	UNIQUE WELL ID.
		N/A	LICENCE NO.
		N/A	RANGE
		NIA	TOWNSHIP
		N/A	SECTION
		N/A	LOCATION
		ALBERTA	PROVINCE
		CANADA	COUNTRY
9067	3 RIVER OPERATIONS	FORDING	FIELD
9057		2933	WELL
	EY COAL	ELK VALL	COMPANY
	2933	(MCES	WIRELINE SER
TRON	SLIM GAMMA-NEU		Pentin

1:200 SLIM GAMMA NEUTRON 2933 07/23/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13 VERSION = 3.64EK









1:200 SLIM GAMMA NEUTRON 07/23/07 2933

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

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NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13 VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2933 07/23/07 02:45 TM VERSION 1 3ER 530	<u></u>				
	DATE	TIME	SENSOR	STA	ANDARD	RÉ	SPONSE
1 2	Jul20,07 Jul20,07 Sep03,06 Sep03,06	01:44:30 01:44:30 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 52.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]



FIELD OFFICE	: PENHOLD	DATE OF LOG : 07/24/07	1067
DATA FROM	: N/A	PROBE : 9057A ,	
MAG. DECL.	: 17.000	DEPTH UNITS : METERS	
LOG: 2933_07-	24-07_09-51_9057A02_3.	48_197.55_DEVI.log	
ST.R DEPTH TRU	E DEPTH NORTH DEV. EAS	T DEV. DISTANCE AZIMUTH	SANG SANGB

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	ANGB
5.28	5.28	-0.00	0.00	0.0	131.1	0.7	131.1
15.00	15.00	0.08	0.03	0.1	19.7	0.5	2.5
25.00	25.00	0.14	-0.08	0.2	329.7	0.9	260.1
35.00	35.00	0.09	-0.29	0.3	287.3	1.0	281.8
45.00	44.99	0.12	-0.47	0.5	284.8	0.7	307.4
55.00	54.99	0.22	-0.59	0.6	290.7	1.1	308.2
65.00	64.99	0.25	-0.79	0.8	287.6	1.0	258.8
75.00	74.99	0.27	-1.02	1.1	284.8	1.6	279.8
85.00	84.98	0.44	-1.25	1.3	289.3	2.6	327.1
95.00	94.97	0.81	-1.52	1.7	297.9	2.5	322.6
105.00	104.96	1.16	-1.82	2.2	302.5	3.0	291.3
115.00	114.94	1.54	-2.34	2.8	303.4	4.2	317.1
125.00	124.91	2.05	-2.93	3.6	304.9	5.0	304.1
135.00	134.86	2.59	-3.73	4.5	304.7	6.2	315.2
145.00	144.80	3.31	-4.56	5.6	306.0	6.4	309.0
155.00	154.73	3.94	-5.52	6.8	305.5	7.0	304.2
165.00	164.66	4.67	-6.46	8.0	305.9	6.7	308.5
175.00	174.60	5.42	-7.31	9.1	306.5	6.2	312.2
185 00	184.53	6.08	-8.19	10.2	306.6	6.1	288.8
195 00	194.48	6.54	-9.07	11.2	305.8	6.2	319.5
197.38	196.85	6.74	-9.24	11.4	306.1	6.4	320.2

1:200 COMPENSATED DENSITY 2934 07/25/07

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LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17

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NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 3 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

MATRIX DELTA T: 177 : 13.00 BIT SIZE VERSION = 3.64EK

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CALIPERL METERS RES(SG) 3 CM 17 0 OHM-M 30000 GAMMA DEN(CDL) 0 API-GR 140 G/CC 3 (ur (ur 10 ہے۔ اک ~ 2 20 C ح -र Ζ



NDITIONS	IDED SUBJECT TO STANDARD TERMS AND CON	VICES PROV	ALL SER
			REMARKS 2
			REMARKS 1
	ER	B. Beringe	RECORDED BY
	NG	SDS DRILLI	WITNESSED BY
		:1.0	MUD WEIGHT
		NIA	MUD RES
		NIA	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		STEEL	CASING TYPE
		ί	CASING DRILLER
		N/A	CASING LOGGER
		244.75	LOG BOTTOM
		0.35	LOG TOP
		:13	BIT SIZE
		246	DEPTH ORILLER
		07/25/07	DATE
	ELEVATION GL N/A	N.GL	DRL MEASURED FROM
	ELEVATION DF 11/A	N.GL	LOG MEASURED FROM
	ELEVATION KB N/A	Ξ	PERMANENT DATUM
		N/A	UNIQUE WELL ID.
		NIA	LICENCE NO.
		N/A	RANGE
		N/A	TOWNSHIP
		N/A	SECTION
		A/N	LOCATION
		B.C.	PROVINCE
		CANADA	COUNTRY
9067	RIVER OPERATIONS	FORDING	FIELD
OTHER SERVICES:		2934	WELL
	Y COAL	ELK VALLE	COMPANY
	2934	WICES	WIRELINE SER
JTRON	SLIM GAMMA-NEU		Centri



1:200 SLIM GAMMA NEUTRON 2934 07/25/07

LOG PARAMETERS

ΓΔ Τ · 177

MATRIX DENSITY : 2.65NEUTRON MATMAGNETIC DECL : 17ELECT. CUTOFPRESENTATION NAME/DATE =9067A.007/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 7A.0 07/04/2007 MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

ד 1 5	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2934 07/25/07 02:15 TM VERSION 1 BER 530					
	DATE TIME	SENSOR	STANDARD		RESPONSE		
1	Jul20,07	01:44:30	GAMMA	î 000	[API-GR]	1.00	[CPS]
	Jul20,07	01:44:30	GAMMA	250.000	[API-GR]	52.00	[CPS]
2	Sep03.06	10:47:15	NEUTRON	1.000	API-N 1	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]

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SCALE: 5 M/CM CLIENT: ELK VALLEY COAL LOCATION: FORDING RIVER OPERATIONS TRUE DEPTH: 243.47 M HOLE ID: 2934 AZIMUTH: 311.4 DATE OF LOG: 07/25/07 DISTANCE: 20.6 M PROBE: 9057A 1067 + = 50 M INCRMAG DECL: 17.0 \circ = Bottom of Hole N_40.0M 30.0M 20.0M 10.0M W E S

* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. : 2934	
FIELD OFFICE	: PENHOLD	DATE OF LOG : 07/25/07	
DATA FROM	: N/A	PROBE : 9057A ,	1067
MAG. DECL.	: 17.000	depth units : meters	

LOG: 2934_07-25-07_18-36_9057A_.02_2.59_245.19_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.00	9.99	0.04	-0.00	0.0	358.1	0.9	8.8
20.00	19.99	0.24	0.09	0.3	19.3	1.8	25.5
30.00	29.98	0.60	0.09	0.6	8.3	2.3	317.9
40.00	39.98	0.90	-0.00	0.9	359.8	1.8	345.3
50.00	49.96	1.34	0.13	1.4	5.7	3.6	14.3
60.00	59.94	1.93	0.29	2.0	8.7	3.4	17.0
70.00	69.92	2.56	0.42	2.6	9.2	3.7	16.8
80.00	79.90	3.30	0.50	3.3	8.6	4.3	355.7
90.00	89.86	4.11	0.56	4.1	7.7	4.4	352.0
100.00	99.83	4.85	0.42	4.9	5.0	4.0	331.5
110.00	109.81	5.46	0.07	5.5	0.7	3.4	328.1
120.00	119.78	6.04	-0.28	6.0	357.3	3.7	322.8
130.00	129.76	6.55	-0.73	6.6	353.6	4.0	318.5
140.00	139.73	7.24	-1.13	7.3	351.2	5.1	331.5
150.00	149.68	7.98	-1.79	8.2	347.4	6.3	312.8
160.00	159.62	8.64	-2.65	9.0	343.0	6.8	311.3
170.00	169.52	9.41	-3.82	10.2	337.9	8.4	303.0
180.00	179.41	10.18	-5.07	11.4	333.5	8.6	301.2
190.00	189.30	10.93	-6.36	12.6	329.8	8.8	299.9
200.00	199.17	11.64	-7.75	14.0	326.4	9.7	294.5
210.00	209.02	12.20	-9.41	15.4	322.4	10.7	287.9
220.00	218.83	12.78	-11.21	17.0	318.8	10.7	289.4
230.00	228.69	13.04	-12.87	18.3	315.4	10.3	285.4
240.00	238.52	13.44	-14.61	19.8	312.6	9.8	275.1
245.02	243.47	13.60	-15.45	20.6	311.4	10.9	288.7



STANDARD TERMS AND CONDITIONS	S PROVIDED SUBJECT TO	ALL SERVICI	
TO 40 M	DENSITY RUN, DEVIATION	Ň	REMARKS 2
S, BRIDGED 40M	OR BOREHOLE CONDITION	ž	REMARKS 1
	BERINGER	3Y .B.	RECORDED B
		BY N/	WITNESSED E
	-	.1.0	MUD WEIGHT
		N.	MUD RES
		NTURE N/	RM TEMPERA
	VTER	IUID W	BOREHOLE F
	•	N	CASING TYPE
		.LER :12	CASING DRIL
	~	GER N/	CASING LOGO
	0.98	A 31	LOG BOTTOM
	7	0.3	LOG TOP
,		:13	BIT SIZE
1:200	2	_ER 31	DEPTH DRILL
	119/07	207	DATE
ELEVATION GL NIA		Red from .gl	DRL MEASUR
ELEVATION DF N/A		RED FROM.GL	LOG MEASUR
ELEVATION KB N/A	,	DATUM GI	PERMANENT
	•		UNIQUE MELI
	4	N	LICENCE NO.
	A	N	RANGE
	A	N	TOWNSHIP
	A	N	SECTION
	A	N.	LOCATION
	BERTA	ÄL	PROVINCE
	NADA	Ċ	COUNTRY
0057	RDING RIVER OPERATION	Ξ	FIELD
9239	36	29	WELL
	K VALLEY COAL	Ę	COMPANY
2936	ČES	IE SERVI	WIRELIN
A GAMMA-NEUTRON	F SLIN	E ST	Cen

1:200 SLIM GAMMA NEUTRON 2936 07/19/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

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NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

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MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK



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TOOL CALIBRATION 2936 07/19/07 02:16 TOOL 9067A TM VERSION 1 SERIAL NUMBER 530 RESPONSE SENSOR STANDARD DATE TIME 10:59:51 GAMMA 1.000 [API-GR] 1.00 [CPS] May17,07 May17,07 10:59:51 GAMMA 250.000 [API-GR] 70.00 [CPS] [CPS] Sep03.06 10:47:15 NEUTRON 1.000 [API-N] 1.00

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1:200 SLIM GAMMA NEUTRON 2940 07/16/07

LOG PARAMETERS

 MATRIX DENSITY:
 2.65
 NEUTRON MATRIX:
 SANDSTONE
 MATRIX DELTA T:
 177

 MAGNETIC DECL:
 0
 ELECT. CUTOFF:
 999999
 BIT SIZE :
 13

 PRESENTATION NAME/DATE =
 9067A.0
 07/04/2007
 VERSION = 3.64EK



TOOL CALIBRATION 2940 07/16/07 00:01 TOOL 9067A TM VERSION 1 SERIAL NUMBER 530 DATE TIME SENSOR STANDARD RESPONSE Jul16,07 13:22:13 GAMMA 1.000 [API-GR] [CPS] 0.00 [API-GR] [API-N] Jul16,07 13:22:13 (CPS) (CPS) (CPS) GAMMA 250.000 70.00 Sep03,06 10:47:15 NEUTRON 1.000 1.00 Sep03,06 10:47:15 NEUTRON 500.00 500.000 [API-N]

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Centr		SLIM GAMMA-NEUTRON
WIRELINE SER	NICES	2940
COMPANY	ELK VALLE	COAL
WELL	2940	OTHER SERVICES
FIELD	FORDING R	NER OPERATIONS
COUNTRY	CANADA	
PROVINCE	ALBERTA	
LOCATION	A/N	
SECTION	NIA	
TOWNSHIP	NIA	
RANGE	N/A	
LICENCE NO.	NIA	
UNIQUE WELL ID.	NIA	
PERMANENT DATUM	ĢĽ	ELEVATION KB 11/A
LOG MEASURED FROM	M.GL	ELEVATION DF N/A
DRL MEASURED FROM	M :GL	ELEVATION GL 11/A
DATE	:07/16/07	
DEPTH DRILLER	342	
BIT SIZE	:13	
LOG TOP	÷0.30	
LOG BOTTOM	340.89	
CASING LOGGER	N/A	
CASING DRILLER	ເນ	
CASING TYPE	N/A	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	N/A	
MUD RES	N/A	
MUD WEIGHT	:1.0	
WITNESSED BY	N/A	
RECORDED BY	B. BERINGE	2
REMARKS 1		
REMARKS 2		
ALL SEF	RVICES PROV	DED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2940 07/16/07

LOG PARAMETERS

NEUTRON MATRIX : SANDSTONE MATRIX DENSITY : 2.65 MATRIX DELTA T : 177 MAGNETIC DECL: 0 BIT SIZE : 13 ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9067A.0 07/04/2007 VERSION = 3.64EK







TOOL CALIBRATION 2940 07/16/ 00:01 TOOL 9067A TM VERSION 1 SERIAL NUMBER 530 DATE TIME RESPONSE SENSOR STANDARD Jul16,07 13:22:13 GAMMA 1.000 [API-GR] 0.00 Jul16,07 13:22:13

GAMMA 250.000 NEUTRON 1.000 NEUTRON 500.000

PRESENTATION NAME/DATE = 9067A.0 07/04/2007

1

2

.

Sep03,06

Sep03,06

10:47:15

10:47:15

.

[API-GR] [API-N] [API-N]

[CPS] [CPS] [CPS] [CPS] 70.00 1.00 500.00

VERSION = 3.64EK



)		SI IM GAMMA-NEUTRON
WIRELINE SER	(SES	2943
COMPANY	ELK VALLEY	COAL
WELL	2943	OTHER SERVICES:
FIELD	FORDING RI	VER OPERATIONS
COUNTRY	CANADA	BUTE
PROVINCE	ALBERTA	
LOCATION	NIA	
SECTION	N/A	
TOWNSHIP	NA	
RANGE	NIA	
LICENCE NO.	N/A	
UNIQUE WELL ID.	NIA	
PERMANENT DATUM	Ģ	ELEVATION KB N/A
LOG MEASURED FRO	M:GL	ELEVATION DF N/A
DRL MEASURED FROM	M :GL	ELEVATION GL N/A
DATE	:07/21/07	
DEPTH DRILLER	:426	
BIT SIZE	13	
LOG TOP	0.40	
LOG BOTTOM	:424.13	
CASING LOGGER	N/A	
CASING DRILLER	თ	
CASING TYPE	NIA	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	NIA	
MUD RES	N/A	
MUD WEIGHT	:1.0	
WITNESSED BY	NIA	
RECORDED BY	:B. BERINGE	~
REMARKS 1		
REMARKS 2		
ALL SE	RVICES PROVI	DED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2943 07/21/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17

PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13 VERSION = 3.64EK





	NEOTRON WATRIX: SANDSTONE	WATRIA DELTATE 177
MAGNETIC DECL: 17	ELECT. CUTOFF ; 99999	BIT SIZE : 13
PRESENTATION NAME/DATE =	9067A.0 07/04/2007	VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2943 07/21/07 04:22 TM VERSION 1 BER 530		·			
	DATE	TIME	SENSOR	STA	NDARD	RE	SPONSE
1 2	Jul20,07 Jul20,07 Sep03,06 Sep03,06	01:44:30 01:44:30 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 52.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]



* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. : 2943
FIELD OFFICE	: PENHOLD	DATE OF LOG : 07/21/07
Data From	: N/A	PROBE : 9057A , 1067
MAG. DECL.	: 17.000	DEPTH UNITS : METERS
LOG: 2943_07-	-21-07_17-33_9057A02_1	0.61_425.58_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG 82	NGB
12.28	12.27	-0.00	0.00	0.0	124.5	0.7	124.5
20.00	19.99	-0.03	0.10	0.1	107.0	1.0	91.6
30.00	29.99	0.05	0.25	0.3	79.6	1.0	31.7
40.00	39.99	0.19	0.23	0.3	51.1	1.0	310.8
50.00	49.98	0.27	-0.06	0.3	348.3	2.0	285.3
60.00	59.97	0.35	-0.53	0.6	303.3	3.0	279.8
70.00	69.95	0.42	-1.08	1.2	291.0	3.5	267.5
80.00	79.94	0.47	-1.64	1.7	285.9	3.2	277.2
90.00	89.92	0.52	-2.20	2.3	283.4	3.0	275.0
100.00	99.90	0.64	-2.80	2.9	282.9	4.5	302.5
110.00	109.86	1.12	-3.58	3.8	287.3	5.6	299.6
120.00	119.81	1.64	-4.47	4.8	290.1	5.9	304.3
130.00	129.75	2.16	-5.38	5.8	291.9	5.9	300.7
140.00	139.69	2.69	-6.31	6.9	293.1	6.2	297.5
150.00	149.63	3.25	-7.27	8.0	294.1	6.6	299.4
160.00	159.56	3.83	-8.27	9.1	294.9	6.8	300.2
170.00	169.48	4.49	-9.33	10.4	295.7	7.5	305.5
180.00	179.41	5.25	-10.32	11.6	297.0	7.1	308.9
190.00	189.33	6.01	-11.29	12.8	298.0	7.2	305.9
200.00	199.24	6.79	-12.33	14.1	298.8	7.3	304.2
210.00	209.16	7.47	-13.44	15.4	299.1	8.0	271.0
220.00	219.05	8.15	-14.74	16.8	298.9	9.7	298.0
230.00	228.90	8.94	-16.24	18.5	298.8	9.8	297.8
240.00	238.75	9.73	-17.78	20.3	298.7	9.8	297.8
250.00	248.60	10.57	-19.27	22.0	298.7	10.0	301.1
260.00	258.46	11.48	-20.69	23.7	299.0	9.6	302.3
270.00	268.32	12.46	-22.03	25.3	299.5	9.4	307.6
280.00	278.19	13.44	-23.31	26.9	300.0	9.3	306.3
290.00	288.06	14.41	-24.60	28.5	300.4	9.1	307.3
300.00	297.93	15.41	-25.81	30.1	300.8	8.6	310.5
310.00	307.82	16.45	-26.87	31.5	301.5	8.6	317.3
320.00	317.71	17.56	-27.85	32.9	302.2	8.8	319.7
330.00	327.61	18.44	-28.97	34.3	302.5	8.0	304.8
340.00	337.52	19.19	-30.04	35.6	302.6	7.4	305.8
350.00	347.45	19.88	-31.03	36.9	302.7	6.6	307.5
360.00	357.39	20.55	-31.92	38.0	302.8	5.9	301.6
370.00	367.33	21.14	-32.76	39.0	302.8	5.3	307.0
380.00	377.29	21.69	-33.46	39.9	302.9	5.0	303.1
390.00	387.26	22.21	-34.06	40.7	303.1	4.4	307.0
400.00	397.24	22.66	-34.56	41.3	303.3	3.8	335.3
410.00	407.21	23.33	-34.82	41.9	303.8	4.1	344.4
420.00	417.19	23.94	-34.99	42.4	304.4	3.6	350.9
425.40	422.58	24.21	-35.15	42.7	304.6	2.9	315.8



DITIONS	OVIDED SUBJECT TO STANDARD TERMS AND CON	RVICES PR	REMARKS 2 ALL SEI
			REMARKS 1
	IGER	:8. Berin	RECORDED BY
		NIA	WITNESSED BY
		:1.0	MUD WEIGHT
		N/A	MUD RES
		N/A	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		N/A	CASING TYPE
		ω	CASING DRILLER
		NIA	CASING LOGGER
		297.25	LOG BOTTOM
		.0.31	LOG TOP
		:13	BIT SIZE
		300	DEPTH DRILLER
		207/06/07	DATE
	ELEVATION GL N/A	M :GL	DRL MEASURED FRO
	ELEVATION DF N/A	M:GL	LOG MEASURED FRO
	ELEVATION KB JUA	ю. Ц	PERMANENT DATUM
		NIA	UNIQUE WELL ID.
		N/A	LICENCE NO.
		NIA	RANGE
		N/A	TOWNSHIP
		N/A	SECTION
		NIA	LOCATION
	هر	ALBERT/	PROVINCE
		CANADA	COUNTRY
9239	G RIVER OPERATIONS	FORDING	FIELD
9057		2947	WELL
OTHER SERVICES:	LEY COAL	ELK VAL	COMPANY
	2947	WICES	WIRELINE SEI
TRON	SLIM GAMMA-NEUT	Ĕ	Centu

1:200 SLIM GAMMA NEUTRON 2947 07/06/07

LOG PARAMETERS

MATRIX DENSITY : 2.65NEUTRON MATMAGNETIC DECL : 17ELECT. CUTOFPRESENTATION NAME/DATE =9067A.007/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 067A.0 07/04/2007 MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK



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1:200 SLIM GAMMA NEUTRON 2947 07/06/07

LOG PARAMETERS

MATRIX DENSITY : 2.65NEUTRON MATMAGNETIC DECL : 17ELECT. CUTOFPRESENTATION NAME/DATE =9067A.007/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2947 07/06/07 15:10 TM VERSION 1 BER 530					
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1 2	May17,07 May17,07 Sep03,06 Sep03,06	10:59:51 10:59:51 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 70.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]



* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT FIELD OFF DATA FROM MAG. DECL LOG: 2947	: ELK VA ICE : PENHOL : N/A . : 17.0 _07-31-07_14	LLEY COAL CO D 00 -31_9057A0	R HOLE ID DATE OF PROBE DEPTH U 2_2.96_299.	0. : 294 10G : 07/ 905 NITS : MET 57_DEVI.lo	7 31/07 7 A , ERS 9	1067	
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	ANGB
5.00	5.00	-0.00	-0.00	0.0	264.3	0.9	263.5
15 00	15.00	0.02	-0.20	0.2	274.5	1.1	268.9

TO . AA	TO	V.V£	V · 4 V	· · …			
25.00	25.00	0.03	-0.43	0.4	273.4	1.7	291.4
35.00	34.99	0.16	-0.71	0.7	282.8	1.8	286.2
45.00	44.99	0.19	-0.98	1.0	281.1	1.2	285.4
55.00	54.98	0.44	-1.12	1.2	291.5	2.4	339.1
65.00	64.97	0.87	-1.30	1.6	303.8	2.8	337.8
75.00	74.96	1.29	-1.46	2.0	311.5	2.9	340.6
85.00	84.95	1.60	-1.72	2.3	312.9	1.9	300.1
95.00	94.94	1.73	-2.08	2.7	309.9	2.5	294.8
105.00	104.93	1.96	-2.42	3.1	309.1	3.4	334.1
115.00	114.91	2.54	-2.74	3.7	312.9	4.1	327.8
125.00	124.88	3.15	-3.13	4.4	315.2	4.6	331.9
135.00	134.85	3.82	-3.55	5.2	317.1	4.5	330.8
145.00	144.81	4.58	-3.99	6.1	319.0	5.2	333.1
155.00	154.77	5.42	-4.43	7.0	320.7	5.8	328.5
165.00	164.71	6.36	-4.89	8.0	322.4	6.2	334.7
175.00	174.65	7.36	-5.34	9.1	324.0	6.4	335.3
185.00	184.59	8.42	-5.78	10.2	325.5	6.7	337.7
195.00	194.51	9.57	-6.26	11.4	326.8	7.5	337.0
205.00	204.41	10.83	-6.84	12.8	327.7	8.3	335.4
215.00	214.31	12.14	-7.45	14.2	328.5	7.4	333.2
225.00	224.20	13.07	-8.53	15.6	326.9	8.6	313.3
235.00	234.10	13.99	-9.64	17.0	325.4	8.3	309.3
245.00	244.00	14.82	-10.78	18.3	324.0	8.3	307.1
255.00	253.88	15.97	-11.81	19.9	323.5	9.5	324.6
265.00	263.73	17.29	-12.86	21.5	323.4	9.9	322.2
275.00	273.58	18.61	-13.97	23.3	323.1	10.4	318.5
285.00	283.42	19.97	-15.14	25.1	322.8	10.5	319.4
295.00	293.25	21.33	-16.38	26.9	322.5	10.8	316.5
299.40	297.57	21.94	-16.95	27.7	322.3	11.3	317.1



ID CONDITIONS	IDED SUBJECT TO STANDARD TERMS AN	VICES PROV	ALL SEP
			DEMADYCO
			REMARKS 1
	R	:B. BERINGE	RECORDED BY
		١/A	WITNESSED BY
		1.0	MUD WEIGHT
		N/A	MUD RES
		N/A	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		N/A	CASING TYPE
		ά	CASING BOTTOM
		N/A	CASING OD
		329.01	LOG BOTTOM
		.0.63	LOG TOP
		:13	BIT SIZE
		330	DEPTH DRILLER
		.07/27/07	DATE
	ELEVATION GL N/A	N.GL	DRL MEASURED FROM
	ELEVATION DF N/A	N.GL	LOG MEASURED FROM
	ELEVATION KB N/A	GL	PERMANENT DATUM
		NIA	UNIQUE WELL ID.
		N/A	API NO.
		NA	RANGE
		N/A	TOWNSHIP
		N/A	SECTION
		N/A	LOCATION
		ALBERTA	STATE
		CANADA	COUNTY
9139	RIVER OPERATIONS	FORDING	FIELD
9057		2949	WELL
	YCOAL	ELK VALLE	COMPANY
	2949	MICES	WIRELINE SER
JEUTRON	SLIM GAMMA-N		Centur

1:200 SLIM GAMMA NEUTRON 2949 07/27/07

LOG PARAMETERS

.

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK









	BER 000					
DATE	TIME	SENSOR	STA	ANDARD	RES	SPONSE
Jul20,07	01:44:30	GAMMA	1.000	[API-GR]	1.00	[CPS]
Jul20.07	01:44:30	GAMMA	250.000	API-GR	52.00	[CPS]
Sep03.06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
Sep03.06	10:47:15	NEUTRON	500.000	IAPI-N 1	500.00	[CPS]



* * * * * *	* COMPU-LOG	- VERTICAL DE	VIATION *	* * * * *	*		
CT. T PNU	• FT.K VAT.	WEY COAT	HOLE TD.	: 2949			
CHIERI			DATE OF	TOG : 07/2	7/07		
DAMA PROM	· NT/X		PROBE	: 9057	A .	1067	
MAG DECT.	• 17 00	h	DEPTH UN	ITTS : METH	RS		
T.OG · 2949	07-27-07 15-3	18 90578 .02	3.39 329.5	4 DEVI.log			
CABLE DEPTH	TRUE DEPTH	NORTH DEV. 1	LAST DEV.	DISTANCE	AZIMUTH	SANG S.	angb
5.10	5.09	0.00	-0.00	0.0	284.8	0.7	284.8
15.00	14.99	0.10	-0.15	0.2	301.9	2.5	309.8
25.00	24.96	0.44	-0.72	0.8	301.8	4.2	307.3
35.00	34.93	1.00	-1.39	1.7	305.8	5.5	312.6
45.00	44.87	1.66	-2.21	2.8	307.0	6.6	311.7
55.00	54.80	2.43	-3.09	3.9	308.3	7.0	312.3
65.00	64.72	3.28	-3.98	5.2	309.5	7.2	315.7
75.00	74.64	4.19	-4.85	6.4	310.8	7.3	320.1
85.00	84.55	5.21	-5.76	7.8	312.1	8.1	317.1
95.00	94.44	6.29	-6.81	9.3	312.7	8.9	305.3
105.00	104.33	7.10	-8.00	10.7	311.6	9.2	316.9
115.00	114.20	8.23	-9.12	12.3	312.1	9.1	310.9
125.00	124.06	9.37	-10.35	14.0	312.2	10.1	311.9
135.00	133.89	10.59	-11.69	15.8	312.2	10.9	309.3
145.00	143.68	11.87	-13.27	17.8	311.8	12.0	304.7
155.00	153.43	13.15	-15.06	20.0	311.1	13.4	303.1
165.00	163.13	14.41	-17.15	22.4	310.0	14.6	301.3
175.00	172.82	15.75	-19.24	24.9	309.3	14.4	303.4
185.00	182.50	17.14	-21.32	27.4	308.8	15.3	305.3
195.00	192.16	18.62	-23.42	29.9	308.5	14.9	305.5
205.00	201.83	20.09	-25.54	32.5	308.2	14.8	305.9
215.00	211.51	21.60	-27.54	35.0	308.1	14.6	308.7
225.00	221.20	23.20	-29.40	37.5	308.3	13.6	311.5
235.00	230.90	24.93	-31.11	39.9	308.7	14.1	317.5
245.00	240.59	26.81	-32.69	42.3	309.4	14.2	320.3
255.00	250.30	28.65	-34.25	44.7	309.9	13.7	320.7
265.00	260.02	30.52	-35.68	47.0	310.5	13.7	323.5
275.00	269.73	32.46	-37.04	49.2	311.2	14.1	326.3
285.00	279.45	34.44	-38.31	51.5	312.0	13.4	328.9
295.00	289.19	36.44	-39.40	53.7	312.8	12.9	334.9
305.00	298.94	38.42	-40.36	55.7	313.6	12.6	332.7
315.00	308.71	40.37	-41.28	57.7	314.4	12.1	335.8
325.00	318.47	42.36	-42.10	59.7	315.2	12.2	339.9
329.36	322.74	43.22	-42.40	60.5	315.5	12.0	342.1



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NDITIONS	OVIDED SUBJECT TO STANDARD TERMS AND CON	WICES PR	ALL SER
		••	REMARKS 2
		••	REMARKS 1
	VGER	:B. Berin	RECORDED BY
		NIA	WITNESSED BY
		1.0	MUD WEIGHT
		NIA	MUD RES
		NIA	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		N/A	CASING TYPE
		د ن	CASING DRILLER
		N/A	CASING LOGGER
		291.50	LOG BOTTOM
		0.38	LOG TOP
		:13	Bit size
		300	DEPTH DRILLER
		07/05/07	DATE
	ELEVATION GL N/A	M :GL	DRL MEASURED FROM
	ELEVATION DF N/A	M.GL	LOG MEASURED FRO
	ELEVATION KB N/A	ğ	PERMANENT DATUM
		A/N	UNIQUE WELL ID.
		N/A	LICENCE NO.
		N/A	RANGE
		N/A	TOWNSHIP
		N/A	SECTION
		N/A	LOCATION
	A	ALBERT,	PROVINCE
	A	CANADA	COUNTRY
9007	IG RIVER OPERATIONS	FORDIN	FIELD
OTHER SERVICES:		2952	WELL
	LLEY COAL	ELK VAL	COMPANY
	2952	(VICES	WIRELINE SER
JTRON	SLIM GAMMA-NEU		Centri

1:200 SLIM GAMMA NEUTRON 2952 07/05/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK





1:200 SLIM GAMMA NEUTRON 2952 07/05/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT CUTOFF : 99999

MATRIX DELTA T 177 BIT SIZE : 13 VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2952 07/05/07 03:11 TM VERSION 1 BER 530					
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1 2	May17,07 May17,07 Sep03,06 Sep03,06	10:59:51 10:59:51 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 70.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]

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* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. :	2952	
FIELD OFFICE	: PENHOLD	DATE OF LOG :	07/05/07	
DATA FROM	: N/A	PROBE :	9057A , 1067	
MAG DECL	: 17.000	DEPTH UNITS :	Meters	
MAG. DECL. LOG: 2952 07.	: 17.000 -05-07 10-48 9057A .02	8.00 299.44 DEV	METERS VI.log	

CABLE DEPTHTRUE DEPTHNORTH DEV.EAST DEV.DISTANCEAZIMUTHSANGSANGB10.0010.000.010.010.031.72.329.4

20.00							
20.00	19.99	0.42	0.06	0.4	8.2	3.0	358.3
30.00	29.98	0.82	-0.19	0.8	346.7	3.0	295.0
40.00	39.97	0.97	-0.68	1.2	324.7	2.8	280.2
50.00	49.95	1.09	-1.18	1.6	312.7	3.8	283.1
60.00	59.93	1.46	-1.75	2.3	309.8	5.4	309.9
70.00	69.88	2.04	-2.56	3.3	308.5	6.4	304.3
80.00	79.81	2.63	-3.53	4.4	306.7	6.9	304.2
90.00	89.73	3.26	-4.64	5.7	305.1	7.7	292.1
100.00	99.63	3.98	-5.83	7.1	304.3	8.6	303.0
110.00	109.52	4.75	-7.07	8.5	303.9	8.7	305.5
120.00	119.40	5.63	-8.35	10.1	304.0	9.6	305.8
130.00	129.26	6.71	-9.61	11.7	304.9	9.8	315.6
140.00	139.11	7.91	-10.82	13.4	306.2	10.5	312.6
150.00	148.94	9.27	-12.12	15.3	307.4	11.5	315.0
160.00	158.74	10.74	-13.46	17.2	308.6	11.6	318.5
170.00	168.52	12.24	-14.85	19.2	309.5	11.9	317.7
180.00	178.31	13.76	-16.22	21.3	310.3	11.8	317.7
190.00	188.10	15.25	-17.63	23.3	310.9	12.1	318.2
200.00	197.88	16.76	-19.06	25.4	311.3	12.2	317.4
210.00	207.65	18.28	-20.56	27.5	311.6	12.3	316.1
220.00	217.42	19.82	-22.05	29.6	311.9	12.3	315.2
230.00	227.18	21.37	-23.56	31.8	312.2	12.7	317.0
240.00	236.94	22.97	-25.04	34.0	312.5	12.8	319.4
250.00	246.69	24.66	-26.48	36.2	313.0	12.3	312.0
260.00	256.43	26.41	-27.93	38.4	313.4	13.2	322.1
270.00	266.16	28.12	-29.46	40.7	313.7	12.9	309.0
280.00	275.90	29.75	-31.03	43.0	313.8	13.2	315.6
290.00	285.65	31.30	-32.65	45.2	313.8	13.1	313.2
299.26	294.67	32.69	-34.19	47.3	313.7	13.0	313.3

Centur MIRELINE SEI	(In the second s	COMPENSATED DENSITY GAMMA-CALIPER-RES 2955
COMPANY	ELK VALLEY CO	XVL
WELL	2965	OTHER SERVICES
FIELD	FORDING RIVE	R OPERATION
COUNTRY	CANADA	
PROVINCE	ALBERTA	
LOCATION	NA	
SECTION	MA	
TOWNSHIP	NIA	
RANGE	NIA	
LICENCE NO.	NA	
UNIQUE WELL ID.	NA	
PERMANENT DATUM	Э.	ELEVATION KB N/A
LOG MEASURED FRO	N .GL	ELEVATION OF NA
DRL MEASURED FRO	N GL	ELEVATION GL NUA
DATE	107/04/07	
DEPTH DRILLER	318	
BIT SIZE	:13.00	
LOG TOP	0.24	
LOG BOTTOM	305.29	
CASING LOGGER	NIA	
CASING DRILLER	5	
CASING TYPE	NA	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	NA	· .
MUD RES	NIA	1
NUD WEIGHT	1.0	
WITNESSED BY	ANA	
RECORDED BY	B. BERINGER	
REMARKS 1	••	

1:200 COMPENSATED DENSITY 2955 07/04/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/02/2007

MATRIX DELTA T: 177 BIT SIZE 13.00 VERSION = 3.64EK





1:200 COMPENSATED DENSITY 2955 07/04/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/02/2007

MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.64EK

IDITIONS	OVIDED SUBJECT TO STANDARD TERMS AND CON	RVICES PR	ALL SE
			REMARKS 2
			REMARKS 1
	NGER	B. BERIN	RECORDED BY
		NIA	WITNESSED BY
		:1.0	MUD WEIGHT
		NA	MUD RES
		NIA	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		N/A	CASING TYPE
		9	CASING DRILLER
		NIA	CASING LOGGER
		305.31	LOG BOTTOM
		:0.68	LOG TOP
		13	bit size
		318	DEPTH DRILLER
		07/03/07	DATE
	ELEVATION GL N/A	M.GL	DRL MEASURED FRO
	ELEVATION DF N/A	Й.GL	LOG MEASURED FRO
	ELEVATION KB N/A	ĢĽ	PERMANENT DATUM
		NIA	UNIQUE WELL ID.
		NIA	LICENCE NO.
		NIA	RANGE
		NIA	TOWNSHIP
		NIA	SECTION
		N/A	LOCATION
	Ä	ALBERT	PROVINCE
U DE DO	>	CANAD	COUNTRY
9779	IG RIVER OPERATIONS	FORDIN	FIELD
9067		2955	WELL
	LLEY COAL	ELK VAL	COMPANY
	2955	RMCES	WIRELINE SEI
TRON	SLIM GAMMA-NEU		Centri

1:200 SLIM GAMMA NEUTRON 2955 07/03/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK





1:200 SLIM GAMMA NEUTRON 2955 07/03/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 : 13 BIT SIZE VERSION = 3.64EK





* * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * * CLIENT: ELK VALLEY COALHOLE ID.: 2955FIELD OFFICEPENHOLDDATE OF LOG: 07/04/07DATA FROM: N/APROBE: 9057A, 1067MAG. DECL.: 17.000DEPTH UNITS: METERS LOG: 2955_07-04-07_10-01_9057A_.02_8.65_305.46_DEVI.log CABLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AZIMUTH SANG SANGE 10.38 10.37 -0.00 0.00 0.0 133.9 1.2 133.9

~ 4 7

100 0

1 2

61 6

A A

20.00	19.99	0.00	Q.1/	0.2	TO3.3		01.0
30.00	29.98	0.20	0.23	0.3	48.9	1.8	325.8
40.00	39.98	0.49	-0.05	0.5	354.5	2.7	298.2
50.00	49.95	0.80	-0.62	1.0	322.4	5.0	298.6
60.00	59.91	1.31	-1.41	1.9	312.9	5.5	295.6
70.00	69.85	1.82	-2.37	3.0	307.5	5.8	309.1
80.00	79.79	2.45	-3.24	4.1	307.1	6.6	312.9
90.00	89.70	3.21	-4.28	5.4	306.9	9.0	294.9
100.00	99.58	4.08	-5.55	6.9	306.3	9.8	303.1
110.00	109.40	5.46	-6.83	8.7	308.6	11.4	320.8
120.00	119.18	7.04	-8.16	10.8	310.8	12.1	324.0
130.00	128.95	8.69	-9.50	12.9	312.4	12.1	318.9
140.00	138.71	10.37	-10.89	15.0	313.6	12.6	320.3
150.00	148.47	11.99	-12.37	17.2	314.1	12.7	314.5
160.00	158.23	13.51	-13.89	19.4	314.2	10.9	312.5
170.00	168.04	14.84	-15.31	21.3	314.1	11.1	316.6
180.00	177.83	16.08	-16.85	23.3	313.7	12.5	308.0
190.00	187.58	17.30	-18.69	25.5	312.8	13.7	289.2
200.00	197.28	18.54	-20.76	27.8	311.8	15.0	300.9
210.00	206.88	20.11	-23.03	30.6	311.1	16.3	310.0
220.00	216.49	21.79	-25.21	33.3	310.8	15.9	304.6
230.00	226.13	23.41	-27.35	36.0	310.6	15.4	307.3
240.00	235.75	25.10	-29.47	38.7	310.4	15.4	308.7
250.00	245.45	26.77	-31.25	41.1	310.6	12.7	305.3
260.00	255.18	28.33	-32.91	43.4	310.7	13.3	320.7
270.00	264.93	29.84	-34.53	45.6	310.8	11.1	311.7
280.00	274.71	31.28	-36.00	47.7	311.0	11.5	307.0
290.00	284.52	32.57	-37.47	49.6	311.0	10.4	306.8
300.00	294.34	33.80	-38.87	51.5	311.0	11.0	303.3
305.28	299.53	34.37	-39.61	52.4	310.9	10.0	301.5



1:200 COMPENSATED DENSITY 2957 07/02/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 0 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/02/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.64EK

UDITIONS	OVIDED SUBJECT TO STANDARD TERMS AND CON	VICES PRO	ALL SER
			REMARKS 2
			REMARKS 1
	IGER	:B. BERIN	RECORDED BY
	ſ	NIA	WITNESSED BY
		1.0	MUD WEIGHT
		NA	MUD RES
		N/A	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		N/A	CASING TYPE
		ð	CASING DRILLER
		N/A	CASING LOGGER
		311.18	LOG BOTTOM
		10.00	LOG TOP
		:13	BIT SIZE
		318	DEPTH DRILLER
		07/01/07	DATE
	ELEVATION GL N/A	1 GL	DRL MEASURED FROM
	ELEVATION DF N/A	N.GL	LOG MEASURED FROM
	ELEVATION KB N/A	ğ	PERMANENT DATUM
		N/A	UNIQUE WELL ID.
		NIA	LICENCE NO.
		NIA	RANGE
		NIA	TOWNSHIP
		NIA	SECTION
		NIA	LOCATION
	Ä	ALBERT	PROVINCE
, Cre	>	CANADA	COUNTRY
0057	IG RIVER OPERATIONS	FORDIN	FIELD
OTHER SERVICES:		2957	WELL
	LEY COAL	ELK VAL	COMPANY
	2957	(VICES	WIRELINE SEI
JTRON	SLIM GAMMA-NEU		Centr
		3	

1:200 SLIM GAMMA NEUTRON 2957 07/01/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 0 PRESENTATION NAME/DATE = 9067A.0 06/28/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK







1:200 SLIM GAMMA NEUTRON 2957 07/01/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 0 PRESENTATION NAME/DATE = 9067A.0 06/28/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 : 13 BIT SIZE VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2957 07/01/07 TM VERSION 1 BER 530	21:25				
	DATE	TIME	SENSOR	STA	NDARD	RE	SPONSE
1	May17,07	10:59:51	GAMMA	1.000	[API-GR]	1.00	[CPS]
	May17,07	10:59:51	GAMMA	250.000	[API-GR]	70.00	[CPS]
2	Sep03.06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]



* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * * * CLIENT : ELK VALLEY COAL HOLE ID. : 2957 FIELD OFFICE : PENHOLD DATE OF LOG : 07/02/07 DATA FROM : N/A PROBE : 9057A , 1067 MAG. DECL. : 17.000 DEPTH UNITS : METERS LOG: 2957_07-02-07_10-18_9057A_.02_8.64_317.27_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.36	10.36	0.00	-0.00	0.0	349.0	1.0	349.0
20.00	20.00	0.11	-0.07	0.1	327.1	0.6	306.9
30.00	30.00	0.13	-0.15	0.2	309.9	0.8	293.0
40.00	40.00	0.19	-0.26	0.3	306.5	2.2	42.9
50.00	49.99	0.66	-0.17	0.7	345.8	3.4	351.2
60.00	59.96	1.30	-0.36	1.3	344.6	4.4	342.3
70.00	69.93	2.04	-0.70	2.2	341.1	4.9	325.6
80.00	79.89	2.82	-1.17	3.1	337.4	5.9	324.5
90.00	89.83	3.72	-1.71	4.1	335.3	6.3	327.2
100.00	99.76	4.71	-2.30	5.2	333.9	6.9	325.4
110.00	109.68	5.80	-2.97	6.5	332.9	7.8	329.9
120.00	119.58	7.02	-3.67	7.9	332.4	8.4	332.8
130.00	129.47	8.32	-4.33	9.4	332.5	8.3	333.8
140.00	139.37	9.63	-4.97	10.8	332.7	8.5	332.6
150.00	149.25	10.99	-5.62	12.3	332.9	9.2	335.4
160.00	159.13	12.41	-6.30	13.9	333.1	9.2	334.9
170.00	169.00	13.87	-6.94	15.5	333.4	9.5	338.6
180.00	178.86	15.40	-7.60	17.2	333.7	9.8	337.3
190.00	188.72	16.93	-8.19	18.8	334.2	9.2	339.3
200.00	198.59	18.45	-8.72	20.4	334.7	9.1	340.7
210.00	208.47	19.95	-9.21	22.0	335.2	9.3	341.9
220.00	218.34	21.45	-9.69	23.5	335.7	8.9	341.9
230.00	228.22	22.93	-10.15	25.1	336.1	8.8	344.4
240.00	238.10	24.38	-10.59	26.6	336.5	8.7	344.7
250.00	247.99	25.80	-11.05	28.1	336.8	8.7	339.8
260.00	257.88	27.18	-11.58	29.5	336.9	8.5	339.1
270.00	267.77	28.55	-12.21	31.1	336.8	8.7	332.0
280.00	277.65	29.90	-12.89	32.6	336.7	8.7	334.4
290.00	287.54	31.23	-13.56	34.0	336.5	8.9	332.7
300.00	297.43	32.56	-14.23	35.5	336.4	8.3	332.7
310.00	307.32	33.86	-14.94	37.0	336.2	8.9	333.2
317.08	314.32	34.80	-15.45	38.1	336.1	8.8	329.0



Penti		SLIM GAMMA-NEUTRON
WIRELINE SER	(VICES	2959
COMPANY	ELK VALLE	YCOAL
WELL	2959	01HER SERVICES: 9057
FIELD	FORDING	IVER OPERATIONS
COUNTRY	CANADA	04400
PROVINCE	ALBERTA	
LOCATION	N/A	
SECTION	NIA	
TOWNSHIP	N/A	
RANGE	NIA	
LICENCE NO.	N/A	
UNIQUE WELL ID.	N/A	
PERMANENT DATUM	GL	ELEVATION KB N/A
LOG MEASURED FROM	M GL	ELEVATION DF N/A
DRL MEASURED FROM	N GL	ELEVATION GL N/A
DATE	06/30/07	
DEPTH DRILLER	350	
BIT SIZE	:13	
LOG TOP	:0,00	
LOG BOTTOM	347.63	
CASING LOGGER	N/A	
CASING DRILLER	ġ	
CASING TYPE	NA	
BOREHOLE FLUID	MATER	
RM TEMPERATURE	NIA	
MUD RES	NIA	
MUD WEIGHT	:1.0	
WITNESSED BY	N/A	
RECORDED BY	B. BERING	ER
REMARKS 1	••	
REMARKS 2		
ALL SEF	NICES PRO	IDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2959 06/30/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 0

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9067A.0 06/28/2007

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK





1:200 SLIM GAMMA NEUTRON 2959 06/30/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 0 PRESENTATION NAME/DATE = 9067A.0 06/28/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2959 06/30/07 08:46 TM VERSION 1 3ER 530					
	DATE	TIME	SENSOR	ST	ANDARD	RES	SPONSE
1	May17,07	10:59:51	GAMMA	1.000	[API-GR]	1.00	[CPS]
	May17,07	10:59:51	GAMMA	250.000	[API-GR]	70.00	[CPS]
2	Sep03,06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]



* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT FIELD OFFICE	: ELK VALLEY COAL : PENHOLD	HOLE ID. DATE OF LOG	: 2959 : 06/30/07
DATA FROM	: N/A	PROBE	: 9057 a , 1067
MAG. DECL.	: 17.000	DEPTH UNITS	: METERS
LOG: 2959 06-	-30-07 13-37 9057A .02	7.78 347.37 DE	VI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZ IMUTH	SANG SANGB
10.00	10.00	0.00	-0.01	0.0	289.5	1.2 288.9
20.00	20.00	0.01	-0.22	0.2	273.0	1.4 256.1
30.00	29.99	-0.11	-0.46	0.5	256.6	1.4 233.9
40.00	39.99	-0.24	-0.63	0.7	249.1	0.8 234.5
50.00	49.99	-0.31	-0.71	0.8	246.3	0.3 185.8
60.00	59.99	-0.32	-0.66	0.7	243.9	0.9 49.9
70.00	69.99	-0.16	-0.55	0.6	253.9	0.4 56.3
80.00	79.99	-0.03	-0.46	0.5	265.9	1.9 10.5
90.00	89.98	0.30	-0.39	0.5	307.5	1.8 19.6
100.00	99.98	0.36	-0.48	0.6	306.7	1.4 273.3
110.00	109.97	0.43	-0.73	0.8	300.5	1.7 289.4
120.00	119.97	0.60	-1.06	1.2	299.6	2.8 302.2
130.00	129.95	0.91	-1.52	1.8	300.9	3.1 306.1
140.00	139.93	1.26	-2.03	2.4	301.9	3.5 312.4
150.00	149.90	1.88	-2.54	3.2	306.5	5.4 339.1
160.00	159.85	2.75	-2.94	4.0	313.1	5.6 337.9
170.00	169.80	3.69	-3.32	5.0	318.0	6.0 341.5
180.00	179.74	4.67	-3.79	6.0	320.9	6.4 339.0
190.00	189.67	5.68	-4.41	7.2	322.2	7.1 316.1
200.00	199.59	6.71	-5.06	8.4	323.0	7.7 328.5
210.00	209.51	7.76	-5.72	9.6	323.6	7.5 330.2
220.00	219.43	8.85	-6.30	10.9	324.6	6.8 331.3
230.00	229.36	9.96	-6.84	12.1	325.5	7.6 333.6
240.00	239.27	11.15	-7.33	13.3	326.7	7.2 343.1
250.00	249.19	12.38	-7.62	14.5	328.4	7.6 351.7
260.00	259.11	13.53	-8.06	15.7	329.2	7.2 331.5
270.00	269.04	14.55	-8.70	17.0	329.1	7.0 333.0
280.00	278.97	15.58	-9.32	18.2	329.1	7.0 325.7
290.00	288.89	16.63	-9.96	19.4	329.1	6.9 332.2
300.00	298.82	17.69	-10.49	20.6	329.3	6.8 327.1
310.00	308.74	18.74	-11.05	21.8	329.5	6.5 337.3
320.00	318.69	19.70	-11.52	22.8	329.7	5.7 314.9
330.00	328.62	20.63	-12.09	23.9	329.6	5.9 338.4
340.00	338.57	21.50	-12.68	25.0	329.5	6.3 314.7
347.20	345.73	22.14	-13.07	25.7	329.5	7.2 339.5



0 +		GAMMA-NEUTRON
WIRELINE SER	(VICES	2960
COMPANY	ELK VALLE	OTHER SERVICES:
WELL	2960	DENSITY
FIELD	FORDING	IVER OPERATIONS
COUNTRY	CANADA	
PROVINCE	BRITISH C	JLUMBIA
LOCATION	N/A	
SECTION	N/A	
TOWNSHIP	N/A	
RANGE	N/A	
LICENCE NO.	NIA	
UNIQUE WELL ID.	NIA	
PERMANENT DATUM	ĢL	ELEVATION KB NIA
LOG MEASURED FROM	M.GL	ELEVATION DF N/A
DRL MEASURED FROM	N GL	ELEVATION GL N/A
DATE	07/13/07	
DEPTH DRILLER	254.00	
BIT SIZE	13.34	
LOG TOP	:1.39	
LOG BOTTOM	253.15	
CASING LOGGER	3.00	
CASING DRILLER	3.00	
CASING TYPE	NIA	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	N/A	
MUD RES	NIA	
MUD WEIGHT	:1,0	
WITNESSED BY	NIA	
RECORDED BY	A. SPASK	~
REMARKS 1	•••	
REMARKS 2		
ALL SE	RVICES PRO	IDED SUBJECT TO STANDARD TERMS AND CONDITIONS

NEUTRON OPEN HOLE 1:200 2960 07/13/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9055a.0 06/03/2007

MATRIX DELTA T : 177 BIT SIZE : 13.34 VERSION = 3.64EK





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NEUTRON OPEN HOLE 1:200 2960 07/13/07

LOG PARAMETERS

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T: 177 BIT SIZE : 13.34 VERSION = 3.64EK

MATRIX DENSITY :	2.65
MAGNETIC DECL :	17
PRESENTATION N	AME/DATE

ELECT CUTOFF : 99999 = 9055a.0 06/03/2007

	TOOL CALIBR TOOL 9055A SERIAL NUME DATE	ATION 2960 07/13/07 TM VERSION 2 BER 237 TIME	17:35 SENSOR	STA	NDARD	RES	PONSE
1	Mar14,07	07:58:09	GAMMA	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	GAMMA	Default	[CPS]	Default	[CPS]
2	Mar14,07	07:58:09	POROSITY	Default	[CPS]		
3	Mar14,07	07:58:09	RES	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	RES	Default	[CPS]	Default	[CPS]
4	Mar14,07	07:58:09	SP	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	SP	Default	[CPS]	Default	[CPS]
5	Mar14,07	07:58:09	NEUTRON	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	NEUTRON	Default	[CPS]	Default	[CPS]
6	Mar14,07	07:58:09	TEMP	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	TEMP	Default	[CPS]	Default	[CPS]







* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. : 2960
FIELD OFFICE	: PENHOLD	DATE OF LOG : 07/13/07
DATA FROM	: N/A	PROBE : 9055A , 237
MAG. DECL.	: 17.000	DEPTH UNITS : METERS
LOG: 2960_07-	-13-07_17-35_9055A02_5	.00_253.15_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG SANGE
5.02	5.02	0.00	-0.00	0.0	317.0	0.0 317.0
10.00	10.00	0.02	-0.01	0.0	329.2	0.6 324.1
15.00	15.00	0.07	-0.05	0.1	322.7	0.9 323.8
20.00	20.00	0.16	-0.12	0.2	322.5	1.9 324.8
25.00	24.99	0.30	-0.22	0.4	323.5	2.5 320.4
30.00	29.99	0.48	-0.35	0.6	323.7	3.0 323.9
35.00	34.98	0.72	-0.56	0.9	321.9	4.3 316.6
40.00	39.96	0.98	-0.84	1.3	319.4	4.5 315.1
45 00	44.95	1.26	-1.18	1.7	316.9	5.4 304.9
50 00	49.92	1.54	-1.55	2.2	314.8	5.5 305.2
55.00	54.90	1.82	-1.94	2.7	313.1	6.0 305.9
60 00	59.87	2.11	-2.38	3.2	311.6	6.2 305.4
65.00	64 84	2.44	-2.84	3.7	310.7	6.9 304.2
70 00	69 81	2.77	-3.32	4.3	309.8	6.5 301.6
70.00	74 78	3.09	-3.77	4.9	309.3	6.3 303.7
90.00	79.75	3.37	-4.22	5.4	308.6	5.5 301.7
80.00	94 72	3.62	-4.61	5.9	308.2	4.9 305.5
85.00	69.75	3.94	-4.91	6.2	308.1	4.2 308.8
90.00	03.7± 04 70	4.08	-5.18	6.6	308.3	4.3 312.7
95.00	34.70 00 60	4 36	-5.43	7.0	308.7	4.3 315.3
100.00	104 67	4 66	-5.66	7.3	309.5	4.5 328.7
105.00	104.07	5 01	-5.90	7.7	310.3	4.8 325.7
110.00	109.65	5.04	-6.16	8.2	311.0	5.2 327.7
115.00	110 61	5.50	-6 42	8.6	311.8	5.4 326.7
120.00	TTA. 0T	J. 14 6 10	-6 69	9.1	312.4	5.7 321.6
125.00	124.59	6.14	-7 00	6.5	312.8	5.0 324.1
130.00	129.57	0.17	-7.00	10 1	312.9	6.6 310.4
135.00	134.54	0.00	-7.30	10.6	312.8	6.5 318.6
140.00	139.51	7.23	-0 2E	11 2	312.8	7.1 318.6
145.00	144.4/	7.05	-0.29	11 9	312 9	7.2 314.6
150.00	149.43	8.08	-0.70	12 5	313 0	7.1 317.0
155.00	154.39	8.53	-3.14	13 1	313 2	7.4 316.5
160.00	159.35	8.99	-3.50	13.4	212 6	7.8 322.9
165.00	164.31	9.48	-3.3/	14 4	313 9	7 5 322.7
170.00	169.26	10.00	-10.39	16 1	314 9	7 6 322.0
175.00	174.22	10.52	-10.79	10.1	314.3	7 8 325 4
180.00	179.18	11.08	-11.1/	10.7	311.0	7 8 319 9
185.00	184.13	11.61	-11.57	17.4	315.A	7 2 325 4
190.00	189.09	12.13	**************************************	17.0	316 6	7 2 319.4
195.00	194.05	12.62	-12.35	10 3	315.0	6 4 324 8
200.00	199.01	13.09	-12.72	T9.3	310.0	6 A 92A 1
205.00	203.98	13.54	-13.05	18.8	316.0	2 1 323.4
210.00	208.95	13.97	-13.37	19.3	316.3	0.1 J2J.6 E 0 300 1
215.00	213.93	14.38	-13.67	19.8	310.5	3.0 320.1 E 0 337 7
220.00	218.90	14.80	-13.95	20.3	316.7	D.J 321.7 E 0 000 4
225.00	223.87	15.24	-14.22	20.8	317.0	5.3 343.9 E E 300 4
230.00	228.85	15.67	-14.48	21.3	317.3	5.5 32 9 .9
235.00	233.83	16.06	-14.73	21.9	317.5	5.7 330.7
240.00	238.80	16.46	-14.97	22.2	317.7	4.9 330.0
245.00	243.79	16.82	-15.19	22.7	317.9	4.7 329.0
250.00	248.77	17.17	-15.40	23.1	318.1	4.8 324.9
253.16	251.88	17.38	-15.52	23.3	318.2	4.7 332.0



VERSION = 3.64EK

Pentit		SLIM GAMMA-NEUTRON
WIRELINE SER	(VICES	2962
COMPANY	ELK VALLE	(COAL
WELL	2962	OTHER SERVICES
FIELD	FORDING R	IVER OPERATIONS
COUNTRY	CANADA	
PROVINCE	ALBERTA	
LOCATION	N/A	
SECTION	N/A	
TOWNSHIP	1N/A	
RANGE	NIA	
LICENCE NO.	N/A	
UNIQUE WELL ID.	1/A	
PERMANENT DATUM	ē	ELEVATION KB 11/A
LOG MEASURED FROM	M.GL	ELEVATION DF N/A
DRL MEASURED FROM	N OF	ELEVATION GL N/A
DATE	06/28/07	
DEPTH DRILLER	350	
BIT SIZE	:13	
LOG TOP	0.30	
LOG BOTTOM	:347.30	
CASING LOGGER	NIA	
CASING DRILLER	6	
CASING TYPE	NA	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	NIA	
MUD RES	NIA	
MUD WEIGHT	:1.0	
WTNESSED BY	N/A	
RECORDED BY	B. BERINGE	F
REMARKS 1		
REMARKS 2	•••	
ALL SER	NICES PROV	DED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2962 06/28/07

ELECT CUTOFF 99999

MATRIX DENSITY : 2.65

PRESENTATION NAME/DATE = 9067A.0 06/28/2007

MAGNETIC DECL: 0

LOG PARAMETERS

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T: 177

BIT SIZE : 13 VERSION = 3.64EK





1:200 SLIM GAMMA NEUTRON 2962 06/28/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 0

NEUTRON MATRIX : SANDSTONE

ELECT CUTOFF 99999 PRESENTATION NAME/DATE = 9067A.0 06/28/2007

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2962 06/28/07 05:49 TM VERSION 1 SER 530			·		
	DATE	TIME	SENSOR	ST	ANDARD	RE	ESPONSE
1 2	May17,07 May17,07 Sep03,06 Sep03,06	10:59:51 10:59:51 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 70.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]

PLAN VIEW COMPU-LOG DEVIATION



* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

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CLIENT		ELK VALLEY COAL	HOLE	ID.	:	2962
FIELD OFFICE	:	PENHOLD	DATE	OF LOG	:	06/28/07

DATA	FROM	: N/A		PROBE	: 90	57 a ,	1067	
MAG.	DECL.	: 17.0	00	DEPTH U	NITS : ME	TERS		
LOG:	2962_06-	-28-07_11	-24_9057A1	_9.70_349.1	.0_DEVI.lo	g		
CABLE DI	PTH TRU	JE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB

11.60	11.60	0.00	-0.00	0.0	292.9	1.4	292.9
20.00	20.00	0.01	-0.20	0.2	273.1	1.2	260.1
30.00	29.99	0.02	-0.48	0.5	272.4	2.1	283.0
40.00	39.98	0.20	-0.79	0.8	284.3	3.9	333.6
50.00	49.95	0.88	-1.28	1.6	304.4	5.1	320.1
60.00	59.91	1.58	-1.84	2.4	310.5	4.8	300.7
70.00	69.86	2.36	-2.47	3.4	313.7	5.9	325.0
80.00	79.80	3.22	-3.11	4.5	316.0	6.3	328.3
90.00	89.74	4.13	-3.75	5.6	317.8	6.6	328.0
100.00	99.66	5.13	-4.40	6.8	319.4	7.3	328.6
110.00	109.58	6.19	-5.13	8.0	320.3	7.7	330.6
120.00	119.52	7.00	-5.88	9.1	320.0	6.1	311.9
130.00	129.46	7.69	-6.68	10.2	319.0	5.4	319.3
140.00	139.36	8.85	-7.43	11.6	320.0	8.2	324.7
150.00	149.26	10.03	-8.27	13.0	320.5	8.7	323.8
160.00	159.14	11.27	-9.13	14.5	321.0	8.8	326.4
170.00	169.02	12.54	-10.03	1 6 .1	321.3	9.0	327.0
180.00	178.90	13.80	-10.96	17.6	321.5	8.8	322.7
190.00	188.76	15.04	-12.00	19.2	321.4	9.4	320.7
200.00	198.62	16.27	-13.12	20.9	321.1	10.0	318.3
210.00	208.46	17.55	-14.41	22.7	320.6	10.8	315.0
220.00	218.27	18.84	-15.86	24.6	319.9	11.1	312.9
230.00	228.09	20.11	-17.26	26.5	319.4	10.6	313.3
240.00	237.92	21.33	-18.60	28.3	318.9	10.3	312.3
250.00	247.75	22.54	-19.96	30.1	318.5	10.7	306.9
260.00	257.58	23.72	-21.38	31.9	318.0	10.8	308.6
270.00	267.39	24.88	-22.91	33.8	317.4	11.4	303.9
280.00	277.17	26.08	-24.61	35.9	31 6 .7	12.3	306.6
290.00	286.98	27.11	-26.26	37.7	315.9	10.9	295.3
300.00	296.76	28.30	-27.94	39.8	315.4	12.2	306.5
310.00	306.54	29.56	-29.64	41.9	314.9	12.0	309.0
320.00	316.31	30.89	-31.28	44.0	314.6	12.5	311.3
330.00	326.07	32.36	-32.92	46.2	314.5	12.8	315.6
340.00	335.82	33.89	-34.53	48.4	314.5	13.2	314.8
349.10	344.49	35.30	-35.93	50.4	314.5	12.9	316.2

Centu	COMPENSATED DENSITY
WIRELINE SEI	GAMMA-CALIPER-RES
COMPANY	
WELL	
FIELD	FORDING RIVER OPERATIONS
COUNTRY	
PROVINCE	BRITISH COLUMBA
LOCATION	NIA
SECTION	NA
TOWNSHIP	NIA
RANGE	NIA
LICENCE NO.	NIA
UNIQUE WELL ID.	NA
PERMANENT DATUM	GL ELEVATION KB NUA
LOG MEASURED FROM	M.GL ELEVATION DF NIA
DRL MEASURED FROM	U.GL ELEVATION GL. NA
DATE	077112/07
DEPTH DRILLER	238.00
BIT SIZE	13.34
LOG TOP	283
LOG BOTTOM	226.38
CASING LOGGER	5.00
CASING DRILLER	5.00
CASING TYPE	NA
BOREHOLE FUID	MATER
RM TEMPERATURE	NIA
MUD RES	NIA
MUD WEIGHT	10
WITNESSED BY	MA
RECORDED BY	A. SPASKYY
REMARKS 1	
REMARKS 2	
	VICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS
~	

DENSITY OPEN HOLE 1:200 2963 07/12/07

LOG PARAMETERS

-

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/13/2007

MATRIX DELTA T : 177 BIT SIZE : 13.34 VERSION = 3.64EK

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	GAMMA-NEUTRON
WIRELINE SERVICES	2963
	EY COAL
WELL 2963	OTHER SERVICES
FIELD FORDING	RIVER OPERATIONS
COUNTRY CANADA	
PROVINCE BRITISH C	COLUMBIA
LOCATION N/A	
SECTION N/A	
TOWNSHIP N/A	
RANGE N/A	
LICENCE NO. N/A	
UNIQUE WELL ID. N/A	
PERMANENT DATUM GL	ELEVATION KB N/A
LOG MEASURED FROM:GL	ELEVATION DF N/A
DRL MEASURED FROM GL	ELEVATION GL N/A
DATE 07/12/07	
DEPTH DRILLER 236.00	
BIT SIZE :13.34	
LOG TOP :1.35	
LOG BOTTOM 235,46	
CASING LOGGER 5.00	
CASING DRILLER 5.00	
CASING TYPE N/A	
BOREHOLE FLUID WATER	
RM TEMPERATURE N/A	
MUD RES N/A	
MUD WEIGHT :1.0	
WITNESSED BY :	
RECORDED BY A. SPASK	.YY
REMARKS 1	
REMARKS 2	
ALL SERVICES PRO	VIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

NEUTRON OPEN HOLE 1:200 2963 07/12/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9055A.0 06/03/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13.34 VERSION = 3.64EK



METERS NEUTRON 2100 API-N 4100 GAMMA NEUTRON 0 API-GR 200 100 2100 API-N Ü < æ 4 10 5 < 3 S 20 Ş





NEUTRON OPEN HOLE 1:200 2963 07/12/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9055A.0 06/03/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13.34 VERSION = 3.64EK

	TOOL CALIBR TOOL 9055A SERIAL NUME	ATION 2963 07/12/07 16:41 TM VERSION 2 BER 237					
	DATE	TIME	SENSOR	STA	NDARD	RE	SPONSE
1	Mar14,07	07:58:09	GAMMA	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	GAMMA	Default	[CPS]	Default	[CPS]
2	Mar14,07	07:58:09	POROSITY	Default	[CPS]		
3	Mar14,07	07:58:09	RES	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	RES	Default	[CPS]	Default	[CPS]
4	Mar14,07	07:58:09	SP	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	SP	Default	[CPS]	Default	[CPS]
5	Mar14,07	07:58:09	NEUTRON	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	NEUTRON	Default	[CPS]	Default	[CPS]
6	Mar14,07	07:58:09	TEMP	Default	[CPS]	Default	[CPS]
	Mar14,07	07:58:09	TEMP	Default	[CPS]	Default	[CPS]



* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. : 2963
FIELD OFFICE	: PENHOLD	DATE OF LOG : 07/12/07
DATA FROM	: N/A	PROBE : 9055A , 237
MAG. DECL.	: 17.000	DEPTH UNITS : METERS
LOG: 2963 07-	-12-07 16-41 9055A .02	_7.00_235.46_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZ IMUTH	SANG	SANGE
7.02	7.02	-0.00	-0.00	0.0	207.5	0.4	4 207.5
12.00	12.00	0.06	-0.04	0.1	327.3	1.	6 328.9
17.00	17.00	0.21	-0.15	0.3	324.8	2.	5 316.7
22.00	21.99	0.40	-0.27	0.5	326.4	2.	7 329.1
27.00	26.98	0.62	-0.39	0.7	328.0	2.	9 330.1
32 00	31.98	0.86	-0.50	1.0	329.7	3.	2 340.8
37 00	36.97	1.13	-0.62	1.3	331.5	з.	7 338.1
42 00	41.96	1.43	-0.73	1.6	332.9	з.	8 339.5
47 00	46 95	1.75	-0.85	1.9	334.1	з.	9 338.8
E2 00	51 94	2.07	-0.96	2.3	335.1	З.	9 341.4
52.00	56 92	2.42	-1.06	2.6	336.3	4.	4 348.3
57.00	61 01	2 81	-1.16	3.0	337.6	4.	6 347.8
62.00	66 99	3 20	-1.23	3.4	339.0	4.	3 356.2
87.00	71 67	3 61	-1.31	3.8	340.1	4.	5 348.7
72.00	76.05	4 03	-1.40	4.3	340.8	4.	9 348.3
77.00	70.00	4.03	-1 49	4.7	341.4	4.	3 343.7
82.00	01.01	4 79	-1 61	5.1	341.4	4.	4 341.5
87.00	B0.62	H ./ J	_1 73	5.4	341.5	4.	5 344.5
92.00	91.81	5.10		5 9	341.5	4	4 343.5
97.00	96.79	5.52	-1.80	6.2	341 5	4	2 340.7
102.00	101.78	5.67	-2.97	6.6	341 4	A .	5 337.8
107.00	106.76	0.22	-2.09	6.0	341 3	4	1 340.4
112.00	111.75	0.58	-2.23	7.3	341.0		6 337.9
117.00	116.73	6.94 E 00	-2.37	7.3	341.1	4	9 327.2
122.00	121.72	7.30	-2.55		340.7		1 327 3
127.00	126.70	7.60	-2.78	0.2	310.1	5.	2 320 3
132.00	131.68	8.04	-3.07	8.0	333.I 338.0		2 320.3
137.00	136.66	8.39	-3.30	9.0	330.2	о. Е	3 321.3
142.00	141.63	8.77	-3.00	9.5	331.3		5 320.2
147.00	146.61	9.14	-3.96	10.0	330.0		D 344.4
152.00	151.59	9.54	-4.25	10.4	330.0	 	1 337.7
157.00	156.56	9.95	-4.51	10.9	335.0). 5	
162.00	161.54	10.36	-4.76	11.4	335.3	5.	
167.00	166.51	10.79	-5.00	11.9	335.2	<u>.</u>	0 330.4
172.00	171.49	11.24	-5.23	12.4	335.1	<u> </u>	0 333.0
177.00	176.46	11.70	-5.44	12.9	335.1	5.	8 335.5
182.00	181.44	12.16	-5.63	13.4	335.2	5.	6 336.7
187.00	186.41	12.63	-5.79	13.9	335.4	5.	7 339.7
192.00	191.39	13.10	-5.92	14.4	335.7	5.	7 345.3
197.00	196.36	13.59	-6.04	14.9	336.0	5.	8 345.8
202.00	201.34	14.09	-6.12	15.4	336.5	5.	8 352.3
207.00	206.31	14.59	-6.17	15.8	337.1	5.	.9 354.6
212.00	211.29	15.09	-6.21	16.3	337.6	5	7 355.6
217.00	216.26	15.60	-6.22	16.8	338.3	5.	9 359.1
222.00	221.23	16.11	-6.19	17.3	339.0	6	.0 4.3
227.00	226.21	16.64	-6.16	17.7	339.7	5	.9 4.0
232 00	231.18	17.12	-6.09	18.2	340.4	5	.7 9.5
235.46	234.58	17.47	-6.05	18.5	340.9	5	.7 7.4



VERSION = 3.64EK
CONDITIONS	VIDED SUBJECT TO STANDARD TERMS AND (WICES PROV	ALL SEF
			REMARKS 2
			REMARKS 1
	ĒR	B. BERINGI	RECORDED BY
		N/A	WITNESSED BY
		:1.0	MUD WEIGHT
		N/A	MUD RES
		N/A	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		N/A	CASING TYPE
		ġ	CASING DRILLER
		N/A	CASING LOGGER
		321.46	LOG BOTTOM
		0.63	LOG TOP
		:13	BIT SIZE
		324	DEPTH DRILLER
		07/08/07	DATE
	ELEVATION GL N/A	N.GL	DRL MEASURED FROM
	ELEVATION DF N/A	N GL	LOG MEASURED FROM
	ELEVATION KB N/A	JÐ.	PERMANENT DATUM
		N/A	UNIQUE WELL (D.
		NIA	LICENCE NO.
		NIA	RANGE
		NIA	TOWNSHIP
		N/A	SECTION
		A/N	LOCATION
	-	ALBERTA	PROVINCE
		CANADA	COUNTRY
9239	RIVER OPERATIONS	FORDING	FIELD
9057		2965	WELL
OTHER SERVICES	EY COAL	ELK VALLE	COMPANY
	2965	WICES	WIRELINE SER
UTRON	SLIM GAMMA-NE		Centu

1:200 SLIM GAMMA NEUTRON 2965 07/08/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK







1:200 SLIM GAMMA NEUTRON 07/08/07 2965

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A 0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 : 13 BIT SIZE VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2965 07/08/07 09:52 TM VERSION 1 BER 530					
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1	May17,07	10:59:51	GAMMA	1.000	[API-GR]	1.00	[CPS]
	May17,07	10:59:51	GAMMA	250.000	[API-GR]	70.00	[CPS]
2	Sep03,06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]
		······			······································		· · · · ·



* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	:	ELK VALLEY	COAL	HOLE	ID.	:	2965
		DENIHOLD			OF TOG		07/16/07

		•				لتنق علد للأكامية		700	•	0,710,0	*	
DATA	FROM	:	N/A			PROBE	a.		:	9057A	,	1067
MAG.	DECL.	:	17.000			DEPTH	I U	nits	:	METERS		
LOG:	2965_07-	-1	6-07_13-20	_9057A	1_1	6.10_31	.9.	50_DB	IV.	I.log		

CABLE DEPTH	true depth	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	angb
20.00	20.00	0.05	-0.03	0.1	329.0	1.5	329.5
30.00	30.00	0.18	-0.25	0.3	305.2	1.5	285.2
40.00	39.99	0.23	-0.52	0.6	293.6	1.9	276.9
50.00	49.98	0.29	-0.88	0.9	288.6	2.9	307.0
60.00	59.97	0.58	-1.32	1.4	293.8	3.5	301.5
70.00	69.95	0.79	-1.92	2.1	292.3	4.0	286.0
80.00	79.92	1.01	-2.61	2.8	291.2	4.3	288.4
90.00	89.89	1.28	-3.35	3.6	290.9	5.4	294.6
100.00	99.85	1.61	-4.20	4.5	290.9	5.6	286.1
110.00	109.80	2.03	-5.14	5.5	291.5	6.0	298.3
120.00	119.73	2.52	-6.14	6.6	292.4	6.5	296.3
130.00	129.67	3.04	-7.15	7.8	293.0	6.5	297.4
140.00	139.60	3.56	-8.18	8.9	293.6	6.9	298.0
150.00	149.53	4.13	-9.22	10.1	294.1	6.9	295.2
160.00	159.45	4.82	-10.27	11.3	295.1	7.4	306.0
170.00	169.37	5.61	-11.30	12.6	296.4	7.7	307.3
180.00	179.26	6.47	-12.45	14.0	297.5	8.8	307.0
190.00	189.14	7.38	-13.73	15.6	298.3	9.1	305.2
200.00	199.01	8.31	-15.02	17.2	298.9	9.4	308.1
210.00	208.89	9.28	-16.26	18.7	299.7	8.8	308.7
220.00	218.77	10.26	-17.45	20.2	300.4	8.9	310.4
230.00	228.64	11.29	-18.64	21.8	301.2	9.2	312.9
240.00	238.51	12.39	-19.85	23.4	302.0	9.9	313.7
250.00	248.36	13.58	-21.10	25.1	302.8	10.1	314.0
260.00	258.19	14.83	-22.43	26.9	303.5	10.5	312.2
270.00	268.01	16.13	-23.78	28.7	304.1	11.1	315.0
280.00	277.82	17.51	-25.14	30.6	304.8	11.1	315.5
290.00	287.64	18.90	-26.46	32.5	305.5	10.9	317.8
300.00	297.46	20.32	-27.66	34.3	306.3	10.5	321.2
310.00	307.30	21.76	-28.78	36.1	307.1	10.6	321.1
319.50	316.43	23.13	-29.84	37.8	307.8	10.8	322.2

YERMANIENT DATUM SL ELEV OG MEASURED FROM SL ELEV DRL MEASURED FROM SL ELEV OR 97/10007 ELEV DATE 97/10007 ELEV OATE 97/10007 ELEV DEPTH DRILLER 324 ELEV OG BOTTOM 7.25
r DATUM SEL RED FROM SEL ELEVATION OF 5 57710007 LER 324 1.12R 324 1.12R 13.00 7.25 M 2.52.41 3.GER N/A FLUID WATER FLUID WATER N/A FLUID WATER N/A FLUID WATER N/A BY 8. BERINGER
EASURED FROM GL ELEVATION GL #
PTH DRILLER 324 SIZE .13.00 3 BOTTOM .7.25 3 BOTTOM .252.41 SING LOGGER .1.0 SING DRILLER .9 SING TYPE .1.0 SING TYPE .1.0 D RES .1.0 D MEIGHT .1.0 NESSED BY .9. ARKS 1
IT SIZE 13.00 OG BOTTOM 7.25 OG BOTTOM 252.41 ASING LOGGER N/A ASING DRILLER 9 ASING TYPE N/A OREHOLE FLUID WATER M TEMPERATURE N/A ND RES N/A LD WEIGHT 1.0 ASING BY B. BERINGER ECORDED BY B. BERINGER EMARKS 1 :
.0G TOP 7.25 .0G BOTTOM 252.41 .ASING LOGGER N/A .ASING DRILLER 9 .ASING TYPE N/A .OREHOLE FLUID :: WATER MI TEMPERATURE N/A AUD RES N/A AUD RES N/A AUD RES N/A NUT NEIGHT 1.0 .VITNESSED BY 8. BERINGER .EEMARKS 1 :
SASING LOGGER N/A SASING DRILLER 9 SASING TYPE N/A SOREHOLE FLUID MWATER NM TEMPERATURE N/A AUD RES N/A AUD RES N/A VITNESSED BY N/A VECORDED BY BERINGER VEMARKS 1 :
SASING DRILLER 9 SASING TYPE N/A SOREHOLE FLUID MATER RM TEMPERATURE N/A AUD RES N/A AUD RES N/A AUD RES N/A AUD RES N/A RUD WEIGHT 1.0 YITNESSED BY N/A VECORDED BY 8. BERINGER VEMARKS 1 : : :
SASING TYPE N/A DOREHOLE FLUID WATER NM TEMPERATURE N/A AUD RES N/A AUD RES N/A AUD WEIGHT 1.0 VTINESSED BY N/A VECORDED BY B. BERINGER VEMARKS 1 :
Sorehole Fluid Mater IM TEMPERATURE N/A AUD RES N/A AUD RES N/A AUD WEIGHT 1.0 VITNESSED BY N/A IECORDED BY B. BERINGER IEMARKS 1 :
IM TEMPERATURE N/A AUD RES N/A AUD WEIGHT 1.0 WTINESSED BY N/A RECORDED BY 9. B. BERINGER REMARKS 1 :
AUD RES N/A AUD WEIGHT 1.0 VTINESSED BY N/A IECORDED BY 9. BERINGER IEMARKS 1 :
AUD WEIGHT 1.0 WTINESSED BY N/A RECORDED BY 8. BERINGER REMARKS 1 :
NTNESSED BY N/A NECORDED BY B. BERINGER NEMARKS 1 :
recorded by B. Berringer remarks 1 : remarks 2 :
IEMARKS 1 :
IEMARKS 2 :

1:200 COMPENSATED DENSITY 2965 07/10/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17

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NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.64EK





1:200 COMPENSATED DENSITY 2965 07/10/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.64EK

Centre		SLIM GAMMA-NEUTRON
WIRELINE SER	(NCES	2966
COMPANY	ELKVALLE	YCOAL
WELL	2966	OTHER SERVICES:
FIELD	FORDING	IVER OPERATIONS
COUNTRY	CANADA	
PROVINCE	ALBERTA	
LOCATION	N/A	
SECTION	NIA	
TOWNSHIP	NIA	
RANGE	NIA	
LICENCE NO.	N/A	
UNIQUE WELL ID.	N/A	
PERMANENT DATUM	Ģ	ELEVATION KB N/A
LOG MEASURED FROM	M.GL	ELEVATION DF N/A
DRL MEASURED FROM	N OL	ELEVATION GL N/A
DATE	:07/10/07	
DEPTH DRILLER	253	
BIT SIZE	:13	
LOG TOP	:0,42	
LOG BOTTOM	251.66	
CASING LOGGER	NIA	
CASING DRILLER	ω	
CASING TYPE	NIA	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	NIA	
MUD RES	N/A	
MUD WEIGHT	1.0	
WITNESSED BY	N/A	
RECORDED BY	B. Beringe	3R
REMARKS 1	••	
REMARKS 2	•••	
ALL SER	WICES PROV	IDED SUBJECT TO STANDARD TERMS AND CONDITIONS



LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

MATRIX DELTA T: 177 BIT SIZE : 13 VERSION = 3.64EK





1:200 SLIM GAMMA NEUTRON 2966 07/10/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

	TOOL CALIBR TOOL 9007A SERIAL NUME	ATION 2966 07/10/ TM VERSION 1 BER 530	/07 08:00	·			
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1	May17,07	10:59:51	GAMMA	1.000	[API-GR]	1.00	[CPS]
	May17,07	10:59:51	GAMMA	250.000	[API-GR]	70.00	[CPS]
2	Sep03,06	10:47:15	NEUTRON	1.000	API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]

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SCALE: 2 M/CM TRUE DEPTH: 251.95 M AZIMUTH: 325.9 DISTANCE: 13.0 M + = 20 M INCR $^{\circ}$ = BOTTOM OF HOLE

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* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	:	ELK VALLEY COAL COR	HOLE	ID.	:	2966
FIELD OFFICE	:	PENHOLD	DATE	OL TOG	:	08/01/07

DATA	TROM	: N/A	PROBE : 9057.	n , 106 7
MAG.	DECL.	: 17.000	DEPTH UNITS : METE	rs
LOG:	2966 08-	-01-07_16-4	0_9057A02_2.96_252.67_DEVI.log	

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG SA	INGE
5.00	5.00	0.00	-0.01	0.0	303.0	1.5	305.1
15.00	14.99	0.20	-0.41	0.5	295.5	3.3	289.5
25.00	24.97	0.42	-1.02	1.1	292.2	4.1	283.2
35.00	34.94	0.51	-1.71	1.8	286.6	3.4	267.1
45.00	44.92	0.52	-2.31	2.4	282.6	3.6	272.3
55.00	54.90	0.87	-2.93	3.1	286.5	4.5	304.1
65.00	64.87	1.30	-3.56	3.8	290.0	3.7	278.2
75.00	74.65	1.43	-4.QŶ	4.3	209.3	3.Ż	202.1
85.00	84.84	1.62	-4.53	4.8	289.7	2.4	297.6
95.00	94.83	1.84	-4.87	5.2	290.7	2.1	305.2
105.00	104.82	2.28	-5.19	5.7	293.7	3.4	325.7
115.00	114.80	2.76	-5.52	6.2	296.6	3.3	326.8
125.00	124.79	3.05	-5.85	6.6	297.5	2.2	293.2
135 00	134.78	3.22	-6.25	7.0	297.3	2.4	297.5
145 00	144.77	3.44	-6.71	7.5	297.2	2.6	302.3
165.00	154.75	3.69	-7.18	8.1	297.2	2.9	303.1
165 00	164.73	4.11	-7.58	8.6	298.5	4.0	320.8
175 00	174.70	4.82	-7.92	9.3	301.3	4.7	341.7
195.00	184.67	5.63	-8.12	9.9	304.7	4.7	353.4
105.00	104.64	6.22	-8.44	10.5	306.4	3.7	340.4
205 00	204 61	6.99	-8.41	10.9	309.7	4.5	5.1
205.00	214 58	7.77	-8.31	11.4	313.1	4.5	9.7
213.00	224 EE	8.56	-8.12	11.8	316.5	4.9	18.9
225.00	214 K2	9.35	-7.83	12.2	320.0	5.1	22.9
233.00	234.32	10.16	-7.50	12.6	323.6	4.6	5.2
243,00 459 64	251 45	10.75	-7.28	13.0	325.9	5.5	27.7
Z 3 Z . 3 V							



CONDITIONS	OVIDED SUBJECT TO STANDARD TERMS AND	RVICES PRO	REMARKS 2 ALL SE
			REMARKS 1
	X	BLAYLOC	RECORDED BY
	LLING	SDS DRII	WITNESSED BY
		:1.0	MUD WEIGHT
		N/A	MUD RES
		N/A	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		STEEL	CASING TYPE
		نئ ا	CASING BOTTOM
		N/A	CASING OD
		297.88	LOG BOTTOM
		0.33	LOG TOP
		<u>1</u> 3	BIT SIZE
		300	DEPTH DRILLER
		07/28/07	DATE
	ELEVATION GL N/A	MGL	DRL MEASURED FRO
	ELEVATION DF N/A	M.GL	LOG MEASURED FRO
	ELEVATION KB N/A	Ъ	PERMANENT DATUM
		NIA	UNIQUE WELL ID.
		N/A	API NO.
		N/A	RANGE
		N/A	TOWNSHIP
		NIA	SECTION
		N/A	LOCATION
		BC	STATE
		CANADA	COUNTY
	3 RIVER OPERATIONS	FORDING	FIELD
		2968	WELL
	EY COAL CORPORATION	ELK VALL	COMPANY
Y (CPS) LL PIPE	GAMMA-DENSIT LOG THRU DRI 2968	(VCES	Centur WIRELINE SER

1:200 SLIM GAMMA CPS 2968 07/28/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9068A.0 07/16/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK







1:200 SLIM GAMMA CPS 2968 07/28/07



MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9068A.0 07/16/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF 99999

MATRIX DELTA T : 177 : 13 BIT SIZE VERSION = 3.64EK





* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT FIELD OFFICE	: ELK VALLE : PENHOLD	Y COAL COR	HOLE ID. DATE OF LOG	: 2968 : 07/29/07
DATA FROM	: N/A		PROBE	: 9057A , 1067
LOG: 2968_07	-29-07_15-15	_9057A02_0	DEFIN CMITS 0.33_299.40_D	EVI.log

CABLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AZIMUTH SANG SANGE

TO:00	3.30	0.10	v. v.	V · 2	312.0		
20.00	19.96	0.71	-0.26	0.8	339.9	4.1	330.6
30.00	29.94	1.42	-0.53	1.5	339.7	4.3	338.6
40.00	39.89	2.26	-0.89	2.4	338.5	5.7	333.3
50.00	49.85	3.11	-1.30	3.4	337.3	5.5	332.7
60.00	59.81	3.80	-1.80	4.2	334.7	5.0	302.4
70.00	69.77	4.37	-2.51	5.0	330.1	5.0	306.4
80.00	79.73	4.94	-3.20	5.9	327.1	5.1	312.5
90.00	89.68	5.61	-3.83	6.8	325.7	6.3	329.9
100.00	99.62	6.55	-4.41	7.9	326.1	6.4	328.4
110.00	109.56	7.51	-5.04	9.0	326.2	6.7	326.7
120.00	119.49	8.46	-5.70	10.2	326.0	6.4	308.5
130.00	129.43	9.05	-6.58	11.2	324.0	6.1	306.4
140.00	139.37	9.72	-7.44	12.2	322.6	6.4	303.7
150.00	149.30	10.36	-8.45	13.4	320.8	7.4	297.3
160.00	159.21	11.06	-9.52	14.6	319.3	8.4	319.8
170.00	169.10	12.12	-10.60	16.1	318.8	9.0	295.1
180.00	178.96	13.16	-11.88	17.7	317.9	9.6	314.1
190.00	188.82	14.29	-13.10	19.4	317.5	9.2	312.2
200.00	198.69	15.37	-14.24	21.0	317.2	9.2	314.1
210.00	208.57	16.34	-15.45	22.5	316.6	8.7	291.8
220.00	218.46	16.86	-16.81	23.8	315.1	8.6	291.4
230.00	228.34	17.33	-18.28	25.2	313.5	9.3	284.0
240.00	238.18	18.08	-19.87	26.9	312.3	10.4	301.1
250.00	247.98	19.14	-21.55	28.8	311.6	11.5	303.2
260.00	257.80	20.21	-23.14	30.7	311.1	11.0	304.7
270.00	267.61	21.26	-24.72	32.6	310.7	11.1	304.2
280.00	277.44	22.27	-26.29	34.5	310.3	10.8	303.5
290.00	287.26	23.28	-27.90	36.3	309.8	11.2	303.7
299.22	296.30	24.25	-29.39	38.1	309.5	11.3	302.9



1:200 COMPENSATED DENSITY 2972 07/31/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

MATRIX DELTA T: 177 **BIT SIZE** : 13.00 VERSION = 3.64EK





REMA	REMA	RECO)))	WITN	MUD	MUD	RM TE	BORE	CASIN	CASIN	CASIN	LOG B	LOG T	BIT SI	DEPTH	DATE	DRL N	LOGN	PERM	UNIQU	APINO	RANG	TOWN	SECTI	LOCA	STATE	COUN	FIELD	WELL	COMP	WIR		
	RKS 2	RKS 1	RDED BY	ESSED BY	NEIGHT	RES	MPERATURE	HOLE FLUID	g type	G BOTTOM	GOD	OTTOM	OP	Ĩ	+ DRILLER		EASURED FROM	IEASURED FROI	ANENT DATUM	E WELL ID.	<u>,</u>	Ш	SHIP	NO	ION		77			ANY	ELINE SER	ntu	
-	•••		BLAYLOCK	SDS DRILLIN	:1.0	A/N	N/A	WATER	STEEL	ω	N/A	310.04	0.38	:13	312	<u>.07</u> /31/07	N GL	M.GL	GL	N/A	N/A	NIA	N/A	NIA	N/A	BC	CANADA	FORDING RN	2972	ELK VALLEY	 WICES	Ê	
				Ĝ												1	ELEVATION GL N/A	ELEVATION DF N/A	ELEVATION KB N/A									VER OPERATIONS	0	COAL CORPORATION	2972	SLIM GAMMA-NEUTR	
																									-		9057	9067		NTHER SERVICES		RON	

1:200 SLIM GAMMA NEUTRON 2972 07/31/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF 99999

MATRIX DELTA T : 177 BIT SIZE : 13

VERSION = 3.64EK







1:200 SLIM GAMMA NEUTRON 07/31/07 2972

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VEDEION RRAEV



CLIENT: ELK VALLEY COAL CORHOLE ID.: 2972FIELD OFFICE: PENHOLDDATE OF LOG: 07/31/07DATA FROM: N/APROBE: 9057A, 1067MAG. DECL.: 17.000DEPTH UNITS: METERSLOG:2972_07-31-07_11-36_9057A_.02_3.21_311.63_DEVI.log

* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
5.00	4.99	-0.00	0.00	0.0	95.3	0.9	95.2
15.00	14.99	-0.02	0.15	0.1	97.9	0.8	88.7

25.00	24.99	0.11	0.27	0.3	0/.9	1.4	73.3
35.00	34.98	0.44	0.38	0.6	40.8	2.8	8.5
45.00	44.96	1.10	0.41	1.2	20.5	4.7	4.7
55.00	54.92	2.00	0.37	2.0	10.4	5.7	343.8
65.00	64.85	3.01	-0.08	3.0	358.4	6.7	328.9
75.00	74.75	4.38	~0.43	4.4	354.4	8.5	345.5
85.00	84.63	5.92	-0.81	6.0	352.2	9.3	346.2
95.00	94.49	7.51	-1.19	7.6	351.0	9.5	346.0
105.00	104.36	8.93	-1.82	9.1	348.5	8.6	326.3
115.00	114.22	10.55	-2.27	10.8	347.8	9.9	345.7
125.00	124.06	12.25	-2.72	12.5	347.5	10.6	345.7
135.00	133.90	13.99	-3.19	14.3	347.1	10.3	346.1
145.00	143.73	15.73	-3.72	16.2	346.7	10.7	343.1
155.00	153.56	17.48	-4.30	18.0	346.2	10.7	340.6
165.00	163.39	19.23	-4.94	19.9	345.6	10.7	339.3
175.00	173.21	21.00	-5.58	21.7	345.1	10.6	341.2
185.00	183.04	22.73	-6.17	23.6	344.8	10.3	339.8
195.00	192.87	24.46	-6.77	25.4	344.5	10.5	341.2
205.00	202.71	26.14	-7.35	27.2	344.3	10.3	341.0
215.00	212.55	27.80	-7.98	28.9	344.0	10.8	339.3
225.00	222.38	29.50	-8.69	30.8	343.6	10.9	337.3
235.00	232.20	31.21	-9.43	32.6	343.2	10.7	336.5
245.00	242.03	32.90	-10.18	34.4	342.8	10.7	336.0
255.00	251.85	34.62	-10.94	36.3	342.5	10.7	336.4
265.00	261.68	36.30	-11.73	38.2	342.1	10.9	333.3
275.00	271.50	37.94	-12.64	40.0	341.6	11.1	334.5
285.00	281.31	39.70	-13.46	41.9	341.3	11.2	336.4
295.00	291.12	41.48	-14.25	43.9	341.0	11.2	338.1
305.00	300.92	43.30	-15.05	45.8	340.8	11.8	335.1
311.46	307.24	44.49	-15.60	47.2	340.7	11.7	334.9



0 1	SLIM GAMMA-NEUTRON
WIRELINE SER	2973
COMPANY	ELK VALLEY COAL CORPORATION
WELL	2973 9057
FIELD	FORDING RIVER OPERATIONS
COUNTY	CANADA
STATE	₿Ċ
LOCATION	N/A
SECTION	N/A
TOWNSHIP	N/A
RANGE	N/A
API NO.	NA
UNIQUE WELL ID.	MA
PERMANENT DATUM	GL ELEVATION KB N/A
LOG MEASURED FROM	A:GL ELEVATION DF N/A
DRL MEASURED FROM	A GL ELEVATION GL N/A
DATE	08/01/07
DEPTH DRILLER	210
BIT SIZE	:13
LOG TOP	0.24
LOG BOTTOM	207.90
CASING OD	N/A
CASING BOTTOM	à
CASING TYPE	STEEL
BOREHOLE FLUID	WATER
RM TEMPERATURE	NA
MUD RES	N/A
MUD WEIGHT	1.0
WITNESSED BY	SDS DRILLING
RECORDED BY	BLAYLOCK
REMARKS 1	
REMARKS 2	
ALL SEF	VICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2973 08/01/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A529.0 08/01/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13

VERSION = 3.64EK











LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A529.0 08/01/2007

.

NEUTRON MATRIX SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

-

	TOOL CALIBR TOOL 9067A SERIAL NUMB	ATION 2973 08/01/07 01:59 TM VERSION 1 SER 529			- <u> </u>		<u></u>
l t	DATE	TIME	SENSOR	ST	ANDARD	RES	SPONSE
1 2	Sep03,06 Sep03,06 Sep03,06 Sep03,06	10:46:48 10:46:46 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 60.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]

PLAN VIEW COMPU-LOG DEVIATION

CLIENT: ELK VALLEY COAL CORPORATION LOCATION: FORDING RIVER OPERATIONS HOLE ID: 2973 DATE OF LOG: 08/01/07 PROBE: 9057A 1067

MAG DECL: 17.0

SCALE: 5 M/CM TRUE DEPTH: 207.78 M AZIMUTH: 322.7 DISTANCE: 24.3 M + = 20 M INCR $^{\circ}$ = BOTTOM OF HOLE



CLIENT	: ELK VALLEY COAL COR	NOLE ID. : 2973	
FIELD OFFICE	: PENHOLD	DATE OF LOG : 08/01/07	
DATA FROM	: N/A	PROBE : 9057A , 1067	
MAG. DECL.	: 17.000	DEPTH UNITS : METERS	
LOG: 2973 08-	-01-07 17-49 9057A .02 5	.61 209.71 DEVI.log	

CARLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	ANGB
10.00	9.99	0.07	-0.02	0.1	345.7	1.8	351.2
20.00	19.98	0.36	-0.11	0.4	343.5	1.3	342.4
30.00	29.98	0.69	-0.29	0.8	337.2	2.5	326.6
40.00	39.96	1.17	-0.60	1.3	332.7	3.8	323.7
50.00	49.94	1.73	-1.02	2.0	329.5	4.6	321.8
60.00	59.89	2.58	-1.38	2.9	331.9	6.1	338.5
70.00	69.83	3.64	-1.75	4.0	334.2	6.6	337.9
80.00	79.76	4.74	-2.20	5.2	335.1	7.1	333.2
90.00	89.67	5.92	-2.73	6.5	335.3	7.5	336.5
100.00	99.60	6.86	-3.41	7.7	333.6	5.9	316.5
110.00	109.53	7.60	-4.28	8.7	330.6	6.9	310.5
120.00	119.44	8.74	-5.00	10.1	330.2	7.9	328.9
130.00	129.35	9.74	-5.85	11.4	329.0	7.1	305.9
140.00	139.24	10.92	-6.72	12.8	328.4	8.6	325.0
150.00	149.11	12.19	-7.68	14.4	327.8	9.4	322.6
160.00	158.97	13.53	-8.69	16.1	327.3	9.5	323.7
170.00	168.83	14.85	-9.74	17.8	326.7	9.5	318.0
180.00	178.69	16.07	-10.89	19.4	325.9	9.4	314.6
190.00	188.54	17.28	-12.13	21.1	324.9	10.1	312.3
200.00	198.39	18.29	-13.46	22.7	323.7	9.2	296.3
209 54	207 78	19.36	-14.75	24.3	322.7	10.7	312.0

ALL SE	REMARKS 2	REMARKS 1	RECORDED BY	WITNESSED BY	NUD WEIGHT	MUD RES	RM TEMPERATURE	BOREHOLE FLUID	CASING TYPE	CASING BOTTOM	CASING OD	LOG BOTTOM	LOG TOP	BIT SIZE	DEPTH DRILLER	DATE	DRL MEASURED FROM	LOG MEASURED FROM	PERMANENT DATUM	UNIQUE WELL ID.	API NO.	RANGE	TOWNSHIP	SECTION	LOCATION	STATE	COUNTY	FIELD	WELL	COMPANY	Century Ser	
ERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS			BLAYLOCK	SDS DRILLING	01:	NN	N/A	WATER	STEEL	.	N/A	245.89	5.17	:13.00	248	08/04/07	SM GL ELEVATION GL NA	SMIGL ELEVATION DF JVA	GL ELEVATION KB NVA	NA	NA	N/A	NN	A/N	NN	Ŕ		FORDING RIVER OPERATIONS		ELX VALLEY COAL CORPORATION	COMPENSATED DENSITY GAMMA-CALIPER-RES 2974	

1:200 COMPENSATED DENSITY 2974 08/04/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.84EK





Centu	ř.
WIRELINE SER	NICES 2974
COMPANY	
WELL	2974 OTHER SERVICES:
FIELD	FORDING RIVER OPERATIONS
COUNTY	CANADA
STATE	BC
LOCATION	N/A
SECTION	N/A
TOWNSHIP	N/A
RANGE	N/A
API NO.	NIA
UNIQUE WELL ID.	N/A
PERMANENT DATUM	GL ELEVATION KB N/A
LOG MEASURED FROM	MIGL ELEVATION OF N/A
DRL MEASURED FROM	MIGL ELEVATION GLIN/A
DATE	08/03/07
DEPTH DRILLER	246
BIT SIZE	:13
LOG TOP	0.30
LOG BOTTOM	243.83
CASING OD	NIA
CASING BOTTOM	ð
CASING TYPE	STEEL
BOREHOLE FLUID	WATER
RM TEMPERATURE	N/A
MUD RES	N/A
MUD WEIGHT	1.0
WITNESSED BY	SDS DRILLING
RECORDED BY	BLAYLOCK
REMARKS 1	
REMARKS 2	
ALL SEF	RVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2974 08/03/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9067A529.0 08/03/2007

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK











MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A529.0 08/03/2007

ELECT CUTOFF : 99999

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BIT SIZE : 13 VERSION = 3.64EK

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* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

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CLIENT	: ELK VALLEY COAL COR	HOLE ID. : 2974
FIELD OFFICE	: PENHOLD	DATE OF LOG : 08/04/07
DATA FROM	: N/A	PROBE : 9057A , 106
MAG. DECL.	: 17.000	DEPTH UNITS : METERS

LOG: 2974_08-04-07_10-45_9057A_.02_9.20_245.61_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
10.98	10.98	-0.00	-0.00	0.0	207.3	0.2	207.3
20.00	20.00	0.00	-0.10	0.1	271.2	1.5	273.9
30.00	29.99	0.07	-0.47	0.5	277.9	2.6	276.6
40.00	39.98	0.24	-0.99	1.0	283.6	4.2	292.8
50.00	49.95	0.58	-1.65	1.7	289.4	4.3	291.4
60.00	59.91	1.06	-2.32	2.6	294.5	6.0	322.7
70.00	69.84	2.03	-3.04	3.7	303.8	7.8	325.7
80.00	79.75	3.19	-3.73	4.9	310.5	7.8	331.3
90.00	89.65	4.31	-4.45	6.2	314.1	7.7	331.3
100.00	99.54	5.63	-5.18	7.7	317.4	9.8	326.5
110.00	109.36	7.13	-6.31	9.5	318.5	12.0	318.3
120.00	119.13	8.66	-7.78	11.6	318.1	12.1	314.2
130.00	128.91	9.93	-9.39	13.7	316.6	12.6	315.2
140.00	138.65	11.54	-10.96	15.9	316.5	13.2	315.5
150.00	148.36	13.25	-12.64	18.3	316.3	14.0	316.8
160.00	158.05	15.02	-14.35	20.8	316.3	14.5	316.2
170.00	167.74	16.83	-16.07	23.3	316.3	14.8	316.5
180.00	177.40	18.71	-17.84	25.9	316.4	14.8	317.1
190.00	187.02	20.68	-19.72	28.6	316.4	15.7	314.6
200.00	196.61	22.71	-21.70	31.4	316.3	17.1	314.7
210.00	206.11	24.89	-23.92	34.5	316.1	19.1	313.3
220.00	215.56	27.18	-26.28	37.8	316.0	19.0	315.1
230.00	225.00	29.47	-28.66	41.1	315.8	19.3	313.6
240.00	234.42	31.74	-31.10	44.4	315.6	19.5	312.3
245.44	239.55	32.96	-32.44	46.2	315.5	19.2	311.3



0.4		SLIM GAMMA-NEUTRON
WIRELINE SER	MIGES	2975
COMPANY	ELK VALLEY	COAL CORPORATION
WELL	2975	OTHER SERVICES
FIELD	FORDING R	IVER OPERATIONS
COUNTY	CANADA	
STATE	Ë	
LOCATION	N/A	
SECTION	1/A	
TOWNSHIP	N/A	
RANGE	N/A	
API NO.	N/A	
UNIQUE WELL ID.	NIA	
PERMANENT DATUM	GL	ELEVATION KB N/A
LOG MEASURED FROM	A GL	ELEVATION DF 11/A
ORL MEASURED FROM	1.GL	ELEVATION GL 11/A
DATE	08/02/07	
DEPTH ORILLER	220	
BIT SIZE	13	
LOG TOP	.0.26	
LOG BOTTOM	220.17	
CASING OD	N/A	
CASING BOTTOM	ప	
CASING TYPE	STEEL	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	N/A	
MUD RES	N/A	
MUD WEIGHT	:1.0	
WITNESSED BY	SDS DRILLI	NG
RECORDED BY	BLAYLOCK	
REMARKS 1		
REMARKS 2		
ALL SER	VICES PROVI	DED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2975 08/02/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A529.0 08/01/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

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	LOG PARAMETERS	
MATRIX DENSITY : 2.65	NEUTRON MATRIX : SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL: 17.00	ELECT CUTOFF : 99999	BIT SIZE 13
PRESENTATION NAME/DATE =	067A529.0 08/01/2007	VERSION = 3.64EK
		X

DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1 Sep03,06	10:46:48	GAMMA	1.000	[API-GR]	1.00	[CPS]
Sep03,06	10:46:48	GAMMA	250.000	[API-GR]	80.00	[CPS]
2 Sep03,06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]

الالا المائية فسطمه فالفاضية فالمام فالماض فتمات والمتمام مالمان والمسطم تمام والوادي وترجم ترجيت والمتدر والمسر

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* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL COR	HOLE ID. : 2975	
FIELD OFFICE	: PENHOLD	DATE OF LOG : 08/02/07	
data from	: N/A	PROBE : 9057A , 10	067
MAG DEGT	. 17 000	为世的所以 INITED · MEED 0	

MAG. DECL. : 17.000 DEPTH UNITS : METERS LOG: 2975_08-02-07_15-57_9057A_.02_2.88_225.73_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	BANGB
5.00	5.00	0.01	-0.00	0.0	350.0	0.7	347.1
15.00	15.00	0.09	-0.13	0.2	306.6	1.2	301.4
25.00	25.00	0.06	-0.38	0.4	278.9	1.7	264.3
35.00	34.99	0.16	-0.72	0.7	282.8	3.4	289.9
45.00	44.96	0.36	-1.46	1.5	283.7	4.7	291.7
55.00	54.92	0.38	-2.31	2.3	279.3	5.9	261.0
65.00	64.85	0.85	-3.35	3.5	284.2	6.9	297.0
75.00	74.77	1.37	-4.51	4.7	286.9	7.1	296.4
85.00	84.69	1.94	-5.64	6.0	289.0	7.0	302.5
95.00	94.61	2.51	-6.73	7.2	290.4	7.8	249.3
105.00	104.49	2.57	-8.25	8.6	287.3	10.3	281.9
115.00	114.30	2.84	-10.18	10.6	285.6	11.6	280.8
125.00	124.07	3.11	-12.27	12.7	284.2	13.4	283.1
135.00	133.75	3.57	-14.73	15.2	283.6	15.4	280.6
145.00	143.36	4.20	-17.40	17.9	283.6	17.5	287.6
155.00	152.89	4.98	-20.33	20.9	283.7	18.2	285.7
165.00	162.37	5.83	-23.40	24.1	284.0	18.6	284.7
175.00	171.83	6.74	-26.52	27.4	284.3	19.2	285.5
185.00	181.22	7.73	-29.79	30.8	284.5	20.5	286.7
195.00	190.54	8.82	-33.25	34.4	284.9	21.5	286.6
205.00	199.84	10.02	-36.73	38.1	285.3	21.2	289.1
215.00	209.12	11.34	-40.21	41.8	285.8	21.6	292.3
225.00	218.40	12.73	-43.68	45.5	286.2	22.3	292.7
225.56	218.91	12.81	-43.87	45.7	286.3	22.7	293.5

ALL SER	REMARKS 2	REMARKS 1	RECORDED BY	WITNESSED BY	MUD WEIGHT	MUD RES	RM TEMPERATURE	BOREHOLE FLUID	CASING TYPE	CASING BOTTOM	CASING OD	LOG BOTTOM	LOG TOP	BIT SIZE	DEPTH DRILLER	DATE	DRL MEASURED FROM	LOG MEASURED FROM	PERMANENT DATUM	UNIQUE WELL ID.	APINO.	RANGE	TOWNSHIP	SECTION	LOCATION	STATE	COUNTY		WELL	COMPANY			WIRELINE SER	Centu	5		
VICES PRO	••	••	BLAYLOCI	SDS DRILI	1.0	NIA	N/A	WATER	STEEL	8	N/A	281.70	:7.98	:13.00	282	108/05/07	JØL	1 GL	ΣL	NIA	N/A	N/A	NA	N/A	NIA	ġ	CANADA	FORDING	2976	ELK VALLE	:	(NICES	1			
VIDED SUBJECT TO STANDARD TERMS AND CONDITIONS			~	LING													ELEVATION GL 1VA	ELEVATION DF 11/A	ELEVATION KB N/A								2117	RIVER OPERATIONS		Y COAL CORPORATION OTHER SERVICES:			2976	GAMMA-CALIPER-RES	COMPENSATED DENSITY		
	-			 			-				- ··			- ,	<u>,</u>	- <u></u>		.				******			•			•		12.4 4							•
	<u> </u>					1	:2(00	С	0	MI	PE	N	SA	٩T	E	כו	DE	EN	S	T	1		29	76)	0	87	05	/0	7]
															LC	CG	P	AR	AN	١E.	ΤE	RS	;														
	1		- M/ - M/		IX D IETI)en C D	ISIT ECI	Y: L:	2.6! 17	5 .00					NEL ELE	JTR CT		MA JTO	.TRI FF	X: :1	5A 999	NDS 99	STO	NĘ				M. - - - -	ATR T SI	IX C ZE	DEL1	Т А Т :	: 17 13.	7 00			/
			PF	RES	ENT	AT	ION	NA	ME	/DA1	TE :	=	913	9-P	RIN	IT-R	ES	.0	07/	07/2	2007	7						VI	ERS		= 3	3.64	EK				
				•																																•	
			(CAL	IPE	RL						MET	ER	S	•••••					• • • • • •		•••••			F	RES	(SC)			•••••						
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CONDITIONS	IDED SUBJECT TO STANDARD TERMS AND	VICES PROVI	ALL SER
		• •	REMARKS 2
			REMARKS 1
		BLAYLOCK	RECORDED BY
	NG	SDS DRILLI	WITNESSED BY
		:1.0	MUD WEIGHT
		N/A	MUD RES
		NIA	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		STEEL	CASING TYPE
		ġ	CASING BOTTOM
		11/A	CASING OD
		281.21	LOG BOTTOM
· .		.0.35	LOG TOP
		:13	BIT SIZE
		282	DEPTH DRILLER
		08/05/07	DATE
	ELEVATION GL N/A	N :GL	DRL MEASURED FROM
	ELEVATION DF N/A	M:GL	LOG MEASURED FROM
	ELEVATION KB N/A	19.	PERMANENT DATUM
		N/A	UNIQUE WELL ID.
		N/A	API NO.
		N/A	RANGE
		N/A	TOWNSHIP
		N/A	SECTION
		NIA	LOCATION
		BC	STATE
		CANADA	COUNTY
9007	RIVER OPERATIONS	FORDING	FIELD
OTHER SERVICES:		2976	WELL
	EY COAL CORPORATION	ELK VALLE	COMPANY
	2976	(VICES	WIRELINE SEI
EUTRON	SLIM GAMMA-N		Centi

1:200 SLIM GAMMA NEUTRON 2976 08/05/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A529.0 08/05/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK







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1:200 SLIM GAMMA NEUTRON 2976 08/05/07



LOG PARAMETERS

NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177 MATRIX DENSITY : 2.65 BIT SIZE : 13 ELECT. CUTOFF : 99999 MAGNETIC DECL: 17.00 VERSION = 3.64EK PRESENTATION NAME/DATE = 9067A529.0 08/05/2007

	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2976 08/05/07 03:43 TM VERSION 1 BER 529					
	DATE	TIME	SENSOR	STA	NDARD	RE	SPONSE
1	Sep03,06 Sep03,06 Sep03,06 Sep03,06	10:46:48 10:46:48 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 80.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]





* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * * CLIENT : ELK VALLEY COAL COR HOLE ID. : 2976 FIELD OFFICE : PENHOLD DATE OF LOG : 08/05/07 DATA FROM : N/A PROBE : 9057A , 1067 MAG. DECL. : 17.000 DEPTH UNITS : METERS LOG: 2976_08-05-07_13-21_9057A_.02_8.22_281.62_DEVI.log

CABLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AZIMUTH SANG SANGB

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10.00	10.00	0.00	-0.00	0.0	358.4	0.8	0.7	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20.00	20.00	0.09	-0.06	0.1	327.0	0.4	275.8	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30.00	30.00	0.13	-0.01	0.1	354.7	1.7	31.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	40.00	39.99	0.45	0.02	0.4	3.1	2.2	349.3	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	50.00	49.99	0.76	-0.18	0.8	346.9	2.4	305.5	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	60.00	59.98	1.10	-0.38	1.2	340.9	3.6	0.8	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	70.00	69.95	1.84	-0.25	1.9	352.3	4.9	17.1	
90.00 89.86 3.57 0.28 3.6 4.5 4.7 352.7 100.00 99.83 4.35 0.18 4.3 2.4 4.7 353.5 110.00 109.78 5.33 0.42 5.3 4.5 6.4 16.9 120.00 119.71 6.48 0.68 6.5 6.0 6.7 9.3 130.00 129.63 7.70 0.87 7.8 6.4 7.5 9.2 140.00 139.56 8.92 0.82 9.0 5.2 6.5 337.7 150.00 149.49 9.98 0.43 10.0 2.5 6.4 335.8 160.00 159.43 10.94 -0.12 10.9 359.4 7.5 354.6 170.00 169.34 12.22 -0.39 12.2 356.2 8.1 346.5 180.00 179.23 13.69 -0.67 13.7 357.2 9.3 350.6 190.00 189.10 15.29 -0.86 15.3 356.8 9.6 357.8 200.00 208.81 18.66 -1.03 18.7 356.8 9.9 1.7 220.00 218.66 20.38 -0.96 20.4 357.3 10.0 4.3 230.00 228.50 22.17 -0.80 22.2 357.9 10.9 5.8 240.00 238.33 24.01 -0.60 24.0 358.6 10.4 7.3 250.00 27.62 $0.$	80.00	79.91	2.67	0.03	2.7	0.7	5.4	20.2	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	90.00	89.86	3.57	0.28	3.6	4.5	4.7	352.7	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	100.00	99.83	4.35	0.18	4.3	2.4	4.7	353.5	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	110.00	109.78	5.33	0.42	5.3	4.5	6.4	16.9	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	120.00	119.71	6.48	0.68	6.5	6.0	6.7	9.3	
140.00 139.56 8.92 0.82 9.0 5.2 6.5 337.7 150.00 149.49 9.98 0.43 10.0 2.5 6.4 335.8 160.00 159.43 10.94 -0.12 10.9 359.4 7.5 354.6 170.00 169.34 12.22 -0.39 12.2 358.2 8.1 346.5 180.00 179.23 13.69 -0.67 13.7 357.2 9.3 350.6 190.00 189.10 15.29 -0.86 15.3 356.8 9.6 357.8 200.00 198.96 16.95 -0.97 17.0 356.7 9.9 355.8 210.00 208.81 18.66 -1.03 18.7 356.8 9.9 1.7 220.00 218.66 20.38 -0.96 20.4 357.3 10.0 4.3 230.00 228.50 22.17 -0.80 22.2 357.9 10.9 5.8 240.00 238.33 24.01 -0.60 24.0 358.6 10.4 7.3 250.00 248.16 25.79 -0.29 25.8 359.3 10.3 8.7 260.00 257.99 27.62 0.05 27.6 0.1 11.0 12.9 270.00 267.80 29.47 0.53 29.5 1.0 11.1 17.1 280.00 277.62 31.26 1.16 31.3 2.1 10.8 21.7 281.44	130.00	129.63	7.70	0.87	7.8	6.4	7.5	9.2	
150.00 149.49 9.98 0.43 10.0 2.5 6.4 335.8 160.00 159.43 10.94 -0.12 10.9 359.4 7.5 354.6 170.00 169.34 12.22 -0.39 12.2 358.2 8.1 346.5 180.00 179.23 13.69 -0.67 13.7 357.2 9.3 350.6 190.00 189.10 15.29 -0.86 15.3 356.8 9.6 357.8 200.00 198.96 16.95 -0.97 17.0 356.7 9.9 355.8 210.00 208.81 18.66 -1.03 18.7 356.8 9.9 1.7 220.00 218.66 20.38 -0.96 20.4 357.3 10.0 4.3 230.00 228.50 22.17 -0.80 22.2 357.9 10.9 5.8 240.00 238.33 24.01 -0.60 24.0 358.6 10.4 7.3 250.00 248.16 25.79 -0.29 25.8 359.3 10.3 8.7 260.00 257.99 27.62 0.05 27.6 0.1 11.0 12.9 270.00 267.80 29.47 0.53 29.5 1.0 11.1 17.1 280.00 277.62 31.26 1.16 31.3 2.1 10.8 21.7 281.44 279.03 31.51 1.27 31.5 2.3 11.1 23.8	140.00	139.56	8.92	0.82	9.0	5.2	6.5	337.7	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	150.00	149.49	9.98	0.43	10.0	2.5	6.4	335.8	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	160.00	159.43	10.94	-0.12	10.9	359.4	7.5	354.6	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	170.00	169.34	12.22	-0.39	12.2	358.2	8.1	346.5	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	180.00	179.23	13.69	-0.67	13.7	357.2	9.3	350.6	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	190.00	189.10	15.29	-0.86	15.3	356.8	9.6	357.8	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	200.00	198.96	16.95	-0.97	17.0	356.7	9.9	355.8	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	210.00	208.81	18.66	-1.03	18.7	356.8	9.9	1.7	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	220.00	218.66	20.38	-0.96	20.4	357.3	10.0	4.3	
240.00238.3324.01-0.6024.0358.610.47.3250.00248.1625.79-0.2925.8359.310.38.7260.00257.9927.620.0527.60.111.012.9270.00267.8029.470.5329.51.011.117.1280.00277.6231.261.1631.32.110.821.7281.44279.0331.511.2731.52.311.123.8	230.00	228.50	22.17	-0.80	22.2	357.9	10.9	5.8	
250.00248.1625.79-0.2925.8359.310.38.7260.00257.9927.620.0527.60.111.012.9270.00267.8029.470.5329.51.011.117.1280.00277.6231.261.1631.32.110.821.7281.44279.0331.511.2731.52.311.123.8	240.00	238.33	24.01	-0.60	24.0	358.6	10.4	7.3	
260.00257.9927.620.0527.60.111.012.9270.00267.8029.470.5329.51.011.117.1280.00277.6231.261.1631.32.110.821.7281.44279.0331.511.2731.52.311.123.8	250.00	248.16	25.79	-0.29	25.8	359.3	10.3	8.7	
270.00267.8029.470.5329.51.011.117.1280.00277.6231.261.1631.32.110.821.7281.44279.0331.511.2731.52.311.123.8	260.00	257.99	27.62	0.05	27.6	0.1	11.0	12.9	
280.00277.6231.261.1631.32.110.821.7281.44279.0331.511.2731.52.311.123.8	270.00	267.80	29.47	0.53	29.5	1.0	11.1	17.1	
281.44 279.03 31.51 1.27 31.5 2.3 11.1 23.8	280.00	277.62	31.26	1.16	31.3	2.1	10.8	21.7	
	281.44	279.03	31.51	1.27	31.5	2.3	11.1	23.8	



MATRIX DENSITY : 2.65 MAGNETIC DECL 17.00

1

NEUTRON MATRIX : SANDSTONE

MATRIX DELTA T : 177

Penti	*	SLIM GAMMA-NEUTRON
WIRELINE SEA	MCES	2977
COMPANY	ELK VALLEY	COAL CORPORATION
WELL	2977	OTHER SERVICES
FIELD	FORDING R	IVER OPERATIONS
COUNTY	CANADA	
STATE	BC	
LOCATION	N/A	
SECTION	NA	
TOWNSHIP	NIA	
RANGE	N/A	
API NO.	NIA	
UNIQUE WELL ID.	N/A	
PERMANENT DATUM	JÐ.	ELEVATION KB NIA
LOG MEASURED FROM	MGL	ELEVATION DF N/A
DRL MEASURED FROM	M GL	ELEVATION GL N/A
DATE	08/10/07	
DEPTH DRILLER	372	
BIT SIZE	:13	
LOG TOP	.0.34	
LOG BOTTOM	371.12	
CASING OD	N/A	
CASING BOTTOM	ġ	
CASING TYPE	STEEL	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	N/A	
MUD RES	NA	
MUD WEIGHT	:1.0	
WITNESSED BY	SDS DRILLIN	0
RECORDED BY	BLAYLOCK	
REMARKS 1		
REMARKS 2		
ALL SER	RVICES PROVI	DED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2977 08/10/07

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METERS

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

NEUTRON



jen. T





1:200 SLIM GAMMA NEUTRON 2977 08/10/07

LOG PARAMETERS

MATRIX DELTA T : 177

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF 99999

BIT SIZE : 13 VERSION = 3.64EK





Penti		SLIM GAMMA-NEUTROI	Z
WIRELINE SER	WICES	2979	
COMPANY	ELKVALLE	Y COAL CORPORATION	
WELL	2979	01HE	R SERVICES
FIELD	FORDING F	RIVER OPERATIONS	
COUNTY	CANADA	92.38 192	
STATE	BC		
LOCATION	N/A		
SECTION	N/A		
TOWNSHIP	N/A		
RANGE	1N/A		
API NO.	N/A		
UNIQUE WELL ID.	N/A		
PERMANENT DATUM	Ξ	ELEVATION KB N/A	
LOG MEASURED FROM	M.GL	ELEVATION DF N/A	
DRL MEASURED FROM	A GL	ELEVATION GL 11/A	
DATE	08/07/07		
DEPTH DRILLER	:324		
BIT SIZE	13		
LOG TOP	0.34		
LOG BOTTOM	323.18		
CASING OD	NIA		
CASING BOTTOM	6		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	NIA		
MUD WEIGHT	1.0		
WTNESSED BY	SDS ORILLIN	č o	
RECORDED BY	BLAYLOCK		
REMARKS 1			
REMARKS 2			
ALL SER	VICES PROVI	DED SUBJECT TO STANDARD TERMS AND CONDITIONS	

1:200 SLIM GAMMA NEUTRON 2979 08/07/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL : 17.00 PRESENTATION NAME/DATE = 9067A529.0 08/05/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64ED





ومعجف ومناحم ومناجع والمتنا متراجع والمراجع والمراجع والمراجع والمراجع

SENSOF STANDARD DATE TIME Sep03,06 [API-GR] 1 000 10:46:48 GAMM-Sep03.06 10:46:48 GAMMA 250 000 [API-GR] [API-N] [API-N] Sep03,06 Sep03,06 10:47:15 10:47:15 NEUTRON 1 000 NEUTRON 500.000 500.00

1

2

RESPONSE 1.00 [CPS] 80.00 [CPS] [CPS] 1.00

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: ELK VALLEY COAL COR HOLE ID. : 2979 CLIENT FIELD OFFICE : PENHOLD DATE OF LOG : 08/08/07 PROBE : 9057A , DATA FROM : N/A MAG. DECL. : 17.000 1067 DEPTH UNITS : METERS LOG: 2979_08-08-07_15-16_9057A_.02_4.85_323.53_DEVI.log CABLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AZIMUTH SANG SANGE 10.00 10.01 0.06 -0.04 0.1 327.8 1.1 330.2

20.00	20.01	0.18	-0.27	0.3	304.0	1.8	274.0	
30.00	30.00	0.20	-0.70	0.7	286.3	3.1	279.8	
40.00	39.98	0.32	-1.28	1.3	284.1	3.7	288.6	
50.00	49.94	0.83	-1.88	2.1	293.7	6.0	326.9	
60.00	59.88	1.77	-2.43	3.0	306.0	6.4	328.6	
70.00	69.81	2.76	-3.07	4.1	312.0	7.0	313.5	
80.00	79.75	3.54	-3.86	5.2	312.5	7.2	332.5	
90.00	89.65	4.71	-4.55	6.6	316.0	8.2	327.1	
100.00	99.56	5.91	-5.26	7.9	318.3	7.8	329.6	
110.00	109.46	7.05	-5.97	9.2	319.7	7.5	326.4	
120.00	119.38	8.13	-6.70	10.5	320.5	7.7	323.8	
130.00	129.30	8.97	-7.62	11.8	319.7	6.6	304.3	
140.00	139.21	9.99	-8.45	13.1	319.8	8.4	331.7	
150.00	149.09	11.36	-9.18	14.6	321.0	9.2	333.1	
160.00	158.96	12.80	-9.82	16.1	322.5	9.2	338.1	
170.00	168.84	14.27	-10.38	17.6	324.0	9.6	339.1	
180.00	178.69	15.88	-10.86	19.2	325.6	10.1	346.8	
190.00	188.54	17.59	-11.18	20.8	327.6	10.0	350.4	
200.00	198.36	19.44	-11.43	22.6	329.5	11.3	352.2	
210.00	208.15	21.51	-11.63	24.5	331.6	12.3	355.2	
220.00	217.90	23.70	-11.74	26.4	333.6	12.8	358.0	
230.00	227.65	25.94	-11.81	28.5	335.5	12.9	356.7	
240.00	237.40	28.16	-11.74	30.5	337.4	12.8	6.0	
250.00	247.14	30.39	-11.55	32.5	339.2	13.4	3.7	
260.00	256.88	32.68	-11.37	34.6	340.8	13.2	4.7	
270.00	266.61	34.95	-11.17	36.7	342.3	13.1	5.4	
280.00	276.35	37.23	-10.89	38.8	343.7	13.3	7.4	
290.00	286.08	39.48	-10.49	40.8	345.1	13.1	13.8	
300.00	295.81	41.69	-9.89	42.8	346.7	13.3	17.2	
310.00	305.54	43.88	-9.16	44.8	348.2	12.9	19.4	
320.00	315.28	46.03	-8.34	46.8	349.7	13.5	21.4	
323.34	318.53	46.75	-8.06	47.4	350.2	13.1	21.9	

20.00

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ALL SEP	REMARKS 2	REMARKS 1	RECORDED BY	WITNESSED BY	MUD WEIGHT	MUD RES	RM TEMPERATURE	BOREHOLE FLUID	CASING TYPE	CASING DRILLER	CASING LOGGER	LOG BOTTOM	LOG TOP	BIT SIZE	DEPTH DRILLER	DATE	DRL MEASURED FROM	LOG MEASURED FRO	DIE MANENT DATUM	UNIQUE WELL ID.	LICENCE NO.	RANGE	TOWNSHIP	SECTION	LOCATION	PROVINCE	COUNTRY	FIELD	MELL	COMPANY	WIRELINE SER	Centu	5	
ERVICES PROVIDED SUBJECT TO STANDARD T			B. BERINGER	N/A	:1.0	NA	N/A	WATER	N/A	ò	NA	207.80	0.80	:13	210	08/18/07	OM GL ELEVATION	DM:GL ELEVATION	I GL ELEVATION	N/A	N/A	N/A	N/A	N/A	N/A	ALBERTA	CANADA	FORDING RIVER OPERATIONS	2987	ELK VALLEY COAL	RVICES	- Fr	SLIM GAMI	
ERMS AND CONDITIONS																	I GL N/A	DF N/A										90)57	9239	OTHER SERVICES	987		MA-NEUTRON	

1:200 SLIM GAMMA NEUTRON 2987 08/18/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 08/14/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK







	TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2987 08/18/07 06:48 TM VERSION 1 BER 529					
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1 2	Sep03,06 Sep03,06 Sep03,06 Sep03,06	10:46:48 10:46:48 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 80.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]





* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT FIELD OFFICE	: Elk Valley Coal : Penhold	HOLE ID. : DATE OF LOG :	2987 08/20/07
DATA FROM	: N/A	PROBE :	9057 A , 1067
MAG. DECL.	: 17.000	DEPTH UNITS :	METERS
LOG: 2987 08-	-20-07 08-11 9057A	.02 10.09 208.29 DE	VI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	az imuth	SANG	SANGB
11.88	11.87	0.00	0.00	0.0	83.3	0.9	83.3
21.00	20.99	-0.01	0.18	0.2	92.0	1.9	85.7
31.00	30.98	0.08	0.57	0.6	81.7	2.3	72.6
41.00	40.98	0.22	0.82	0.9	74.8	1.3	54.8
51.00	50.97	0.31	1.04	1.1	73.3	2.0	72.0
61.00	60.96	0.43	1.42	1.5	73.2	2.5	71.4
71.00	70.96	0.60	1.75	1.9	71.2	2.3	54.8
81.00	80.95	0.89	2.05	2.2	66.4	2.5	40.0
91.00	90.94	1.24	2.33	2.6	62.0	2.2	38.9
101.00	100.93	1.59	2.56	3.0	58.2	2.3	30.9
111.00	110.92	1.90	2.85	3.4	56.3	2.7	56.4
121.00	120.91	2.18	3.21	3.9	55.8	3.2	58.4
131.00	130.90	2.44	3.61	4.4	56.0	2.4	53.8
141.00	140.88	2.68	4.09	4.9	56.7	4.0	70.2
151.00	150.85	2.96	4.84	5.7	58.6	4.5	70.4
161.00	160.81	3.20	5.74	6.6	60.9	6.1	. 76.4
171.00	170.76	3.41	6.69	7.5	62.9	5.5	575.8
181.00	180.72	3.63	7.58	8.4	64.4	5.0	75.7
191.00	190.68	3.85	8.45	9.3	65.5	4.9	75.1
201.00	200.64	4.08	9.32	10.2	66.4	4.7	76.0
208.12	207.74	4.21	9.83	10.7	66.8	3.8	76.3

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS	RECORDED BY B. BERINGER REMARKS 1 DRILLING CONTINUED AFTER LOGGING THROUGH RODS REMARKS 2 :	BOREHOLE FLUID WATER RM TEMPERATURE N/A MUD RES N/A / MUD WEIGHT :1.0	LOG TOP :1.20 LOG BOTTOM 280.64 CASING LOGGER NUA CASING DRILLER 3 .	DATE 10072007 DEPTH DRILLER 272 BIT SIZE :13.00	LOG MEASURED FROM GL DRL MEASURED FROM GL ANA DRL MEASURED FROM GL ANA DATE ANADAT	UNIQUE WELL ID. N/A PERMANIBIT DATUM GL ELEVATION KB N/A	RANGE NIA LICENCE NO. NIA	LOCATION NIA SECTION NIA TOWNSHIP NIA	COMPANY ELKVALLEY COAL WELL 2808 FIELD FORDING RIVER OPERATIONS A BERTA OPERATIONS A BERTA 000000000000000000000000000000000000	COMPENSATED DENSITY GAMMA-CALIPER-RES 2988
	MATE	1:200 C RIX DENSITY : 2.6 NETIC DECL : 17	OMPENS	LOG NEUTR ELECT	D DE B PAR	ENSI AME' TRIX : FF : (TY TERS SANDSTO	2988 DNE	08/22/07 MATRIX D BIT SIZE	ELTA T : 177 : 13.00
-3	CAL	LIPERL CM	METERS	0				RE	IS(SG)	30000
0	AI							DEI	N(CDL)	
		PI-GR	140 0/ mi	1					3/CC	3
		PI-GR	140 One Casult							3
		PI-GR	140 One Case							3
		PI-GR	140 0 (9) (9) (10							
		PI-GR	140 0 C 2 10							
		PI-GR	140 0 (9) (10 10 20		2					
		PI-GR								



Dant.		SLIM GAMMA-NEUTRON
WIRELINE SER	(NCES	2988
COMPANY	ELK VALLE	Y COAL
WELL	2988	011EN SERVICES
FIELD	FORDING	RIVER OPERATIONS 9239
COUNTRY	CANADA	
PROVINCE	ALBERTA	
LOCATION	N/A	
SECTION	N/A	
TOWNSHIP	NA	
RANGE	NIA	· ·
LICENCE NO.	NIA	
UNIQUE WELL ID.	NIA	
PERMANENT DATUM	Ğ	ELEVATION KB N/A
LOG MEASURED FRO	M (GL	ELEVATION DF N/A
DRL MEASURED FROM	M GL	ELEVATION GL N/A
DATE	08/21/07	
DEPTH DRILLER	252	
BIT SIZE	:13.00	
LOG TOP	-0.15	
LOG BOTTOM	249.86	
CASING LOGGER	NIA	
CASING DRILLER	ώ	
CASING TYPE	A/N	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	AIN	
MUD RES	A/N	
MUD WEIGHT	:1.0	
WITNESSED BY	NIA	
RECORDED BY	B. BERING	ĒR
REMARKS 1		
REMARKS 2	•••	
ALL SE	RVICES PRO	VIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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1:200 SLIM GAMMA NEUTRON 2988 08/21/07

LOG PARAMETERS

MATRIX DENSITY : 2.65NEUTRON MATMAGNETIC DECL : 17ELECT. CUTOFPRESENTATION NAME/DATE =9067A.008/14/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13.00 VERSION = 3.64EK

	TOOL CALIBR TOOL 9067A SERIAL NUMB	ATION 2988 08/21/07 20:36 TM VERSION 1 BER 529					
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1	Sep03,06	10:46:48	GAMMA	1.000	[API-GR]	1.00	[CPS]
	Sep03,06	10:46:48	GAMMA	250.000	[API-GR]	80.00	[CPS]
2	Sep03,06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]



CLIENT: ELK VALLEY COAL LOCATION: FORDING RIVER OPERATIONS HOLE ID: 2988 DATE OF LOG: 08/22/07 PROBE: 9057A 1067

MAG DECL: 17.0

SCALE: 2 M/CM TRUE DEPTH: 268.90 M AZIMUTH: 320.5 DISTANCE: 11.2 M + = 50 M INCR $^{\circ}$ = BOTTOM OF HOLE



* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZ IMUTH	Sang Sa	NGB
10.26	10.26	0.00	0.00	0.0	59.4	1.5	59.4
20.00	20.00	0.08	0.21	0.2	69.7	1.2	58.8
30.00	29,99	0.23	0.47	0.5	64.0	2.3	54.9
40.00	39.99	0.48	0.70	0.8	55.6	2.0	27.4
50.00	49.98	0.82	0.79	1.1	44.1	2.2	2.7
60.00	59.97	1.25	0.74	1.5	30.7	2.7	343.3
70.00	69.96	1.68	0.58	1.8	18.9	3.0	332.3
80.00	79.95	2.11	0.26	2.1	7.0	3.3	317.3
90.00	89.93	2.50	-0.16	2.5	356.3	3.1	305.8
100.00	99.91	2.84	-0.64	2.9	347.3	3.7	297.9
110.00	109.89	3.18	-1.17	3.4	339.7	3.8	302.6
120.00	119.87	3.53	-1.75	3.9	333.6	4.0	299.8
130.00	129.84	3.88	-2.35	4.5	328.8	4.0	300.4
140.00	139.82	4.24	-2.96	5.2	325.1	3.8	301.3
150.00	149.79	4.58	-3.58	5.8	322.0	4.6	296.5
160.00	159.76	4.93	-4.25	6.5	319.3	4.3	303.1
170.00	169.74	5.26	-4.85	7.2	317.3	3.8	298.8
180.00	179.71	5.60	-5.50	7.8	315.5	4.1	298.4
190.00	189.69	5.91	-6.13	8.5	313.9	3.6	298.2
200.00	199.67	6.21	-6.66	9.1	313.0	3.0	301.6
210.00	209.66	6.50	-7.04	9.6	312.7	2.2	320.6
220.00	219.65	6.82	-7.21	9.9	313.4	1.8	330.8
230.00	229.65	7.15	-7.29	10.2	314.4	1.9	352.4
240.00	239.64	7.48	-7.28	10.4	315.8	2.0	5.3
250.00	249.63	7.83	-7.23	10.7	317.3	2.0	6.2
260.00	259.63	8.24	-7.18	10.9	318.9	2.6	11.3
269.28	268.90	8.64	-7.12	11.2	320.5	2.6	10.4

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1:200 SLIM GAMMA NEUTRON 2989

08/25/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9067A_530.0 08/25/2007

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK







Jul20,07 01:44:30 GAMMA 1.000 [API-GR] 1.00 [CPS] 1 Jul20,07 01:44:30 GAMMA 250.000 [API-GR] 52.00 [CPS] [CPS] 2 [API-N] 1.00 Sep03,06 10:47:15 NEUTRON 1.000 10:47:15 [CPS] [API-N] 500.00 Sep03,06 NEUTRON 500.000


CLIENT	: ELK VA	LLEY COAL CO	R HOLE ID	. : 298	9		
FIRLD OFF	ICE : PENHOL	D	DATE OF	LOG : 08/	26/07		
DATA FROM	: N/A		PROBE	: 905	7 a ,	1067	
MAG. DECL	. : 17.0	00	DEPTH U	NITS : MET	ERS		
LOG: 2989	08-26-07 14	-38 9057A .0	2 1.34 419.	57 DEVI.lo	g		
•					-		
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
5.00	5.00	-0.01	0.02	0.0	102.5	1.2	74.8
15.00	15.00	-0.06	0.28	0.3	103.1	2.2	104.7
25.00	24.98	-0.15	0.83	0.8	100.6	3.6	95.6
35.00	34.97	-0.24	1.36	1.4	100.0	3.1	101.4
45.00	44.95	-0.39	1.91	2.0	101.4	3.3	101.6
55.00	54.93	-0.58	2.47	2.5	103.2	3.3	110.4
65.00	64.90	-0.82	3.16	3.3	104.5	4.4	114.0
75.00	74.87	-1.11	3.86	4.0	106.0	4.1	114.3

* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

55.00	54.93	-0.58	2.47	2.5	103.2	3.3	110.4
65.00	64.90	-0.82	3.16	3.3	104.5	4.4	114.0
75.00	74.87	-1.11	3.86	4.0	106.0	4.1	114.3
85.00	84.85	-1.47	4.51	4.7	108.0	3.9	121.1
95.00	94.82	-1.86	5.05	5.4	110.3	4.6	133.5
105.00	104.79	-2.35	5.65	6.1	112.6	4.5	130.2
115.00	114.77	-2.85	6.20	6.8	114.7	4.0	134.6
125.00	124.74	-3.34	6.67	7.5	116.6	3.6	137.0
135.00	134.72	-3.79	7.10	8.0	118.1	3.4	138.4
145.00	144.71	-4.19	7.45	8.5	119.4	3.1	137.9
155.00	154.70	-4.57	7.81	9.0	120.3	2.9	129.4
165.00	164.68	-4.91	8.20	9.6	120.9	2.9	127.1
175.00	174.67	-5.20	8.56	10.0	121.3	2.7	128.3
185.00	184.67	-5.38	8.83	10.3	121.4	1.0	133.5
195.00	194.66	-5.53	8.99	10.6	121.6	2.3	130.1
205.00	204.65	-5.86	9.28	11.0	122.3	2.7	139.3
215.00	214.64	-6.21	9.60	11.4	122.9	2.8	137.1
225.00	224.63	-6.54	9.94	11.9	123.3	2.6	125.8
235.00	234.62	-6.82	10.33	12.4	123.4	3.0	121.2
245.00	244.61	-7.08	10.79	12.9	123.3	2.9	119.7
255.00	254.59	-7.31	11.35	13.5	122.8	4.0	109.1
265.00	264.56	-7.51	12.04	14.2	122.0	3.9	125.3
275.00	274.54	-7.69	12.71	14.9	121.2	3.7	105.6
285.00	284.52	-7.85	13.31	15.5	120.5	3.6	100.3
295.00	294.50	-7.93	13.97	16.1	119.6	3.9	92.1
305.00	304.47	-7.92	14.64	16.7	118.4	3.5	93.3
315.00	314.45	-7.96	15.30	17.2	117.5	4.0	90.8
325.00	324.42	-8.01	16.03	17.9	116.5	4.9	95.5
335.00	334.37	-8.08	17.00	18.8	115.4	6.1	97.9
345.00	344.29	-8.10	18.31	20.0	113.9	7.8	88.6
355.00	354.19	-8.07	19.70	21.3	112.3	8.0	86.5
365.00	364.09	-7.99	21.13	22.6	110.7	8.1	87.0
375.00	373.97	-7.97	22.68	24.0	109.4	9.2	90.4
385.00	383.84	-8.02	24.29	25.6	108.3	9.5	94.2
395.00	393.69	-8.18	25.98	27.2	107.5	9.9	96.0
405.00	403.53	-8.36	27.76	29.0	106.8	10.5	95.9
415.00	413.36	-8.59	29.55	30.8	106.2	10.3	110.6
419.50	417.78	-8.69	30.38	31.6	106.0	11.4	92.6

Centur MIRELINE SEL	COMPENSATED DENSITY GAMMA-CALIPER-RES 2990
COMPANY	ELK VALLEY COAL CORPORATION
WELL	2000 OTHER SERVICES
FIELD	FORDING RIVER OPERATIONS
COUNTRY	
PROVINCE	8
LOCATION	NA .
SECTION	NA
TOWNSHIP	N/A
RANGE	
LICENCE NO.	NA
UNIQUE WELL ID.	NA
PERMINENT DATUM	GL ELEVATION KB NIA
LOG MEASURED FROM	W.GL ELEVATION DF N/A
DRL MEASURED FROM	d GL ELEVATION GL NIA
DATE	08/14/07
DEPTH DRILLER	312
BUT SIZE	:13.00
LOG TOP	1.56
LOG BOTTOM	311.71
CASING LOGGER	ANY.
CASING DRILLER	53
CASING TYPE	STEEL
BOREHOLE FLUID	WATER
RM TEMPERATURE	ANA
MUD RES	ANK .
MUD WEIGHT	1.0
WITNESSED BY	SOS DRILLING
RECORDED BY	BERWGER
REMARKS 1	
REMARKS 2	
ALL SER	VICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 COMPENSATED DENSITY 2990 08/14/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.64EK



CALIPERL METERS RES(SG) -3 СМ 17 0 OHM-M 30000 GAMMA DEN(CDL) 10 API-GR 140 G/CC Casing 5 10 4 Test and the second sec 2 Ş D ξ 20 5 Ð く <u></u> 办: S ξ 5 T. 2 ANN 3 < 121. Ş ١ N MANA MANA Σ 5 ΔΛ ٤ 40 224 -Ś 2 > ٦



1:200 COMPENSATED DENSITY 2990 08/14/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.64EK

ALL SER	REMARKS 2	REMARKS 1	RECORDED BY	WITNESSED BY	MUD WEIGHT	MUD RES	RM TEMPERATURE	BOREHOLE FLUID	CASING TYPE	CASING BOTTOM	CASING OD	LOG BOTTOM	LOG TOP	BIT SIZE	DEPTH DRILLER	DATE	DRL MEASURED FROM	LOG MEASURED FROM	PERMANENT DATUM	UNIQUE WELL ID.	API NO.	RANGE	TOWNSHIP	SECTION	LOCATION	STATE	COUNTY	FIELD	WELL	COMPANY	WIRELINE SER	Pentii	
VICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS			BLAYLOCK	SDS DRILLING	1.0	N/A	N/A	WATER	STEEL	ü	N/A	309.86	3.22	13	312	08/12/07	M.GL ELEVATION GL N/A	MIGL ELEVATION DF 11/A	GL ELEVATION KB N/A	NIA	NA	N/A	NIA	N/A	NA	BC	CANADA	FORDING RIVER OPERATIONS	2990 9057	ELK VALLEY COAL CORPORATION	2990	SLIM GAMMA-NEUTRON	

1:200 SLIM GAMMA NEUTRON 2990 08/12/07

MATRIX DENSITY : 2.65 MAGNETIC DECL 17.00

LOG PARAMETERS

PRESENTATION NAME/DATE = 9067A529.0 08/05/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK





1:200 SLIM GAMMA NEUTRON 2990 08/12/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00 ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9067A529.0 08/05/2007

NEUTRON MATRIX : SANDSTONE MATRIX DELTA T : 177

BIT SIZE 13 VERSION = 3.64EK

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TOOL CALIBR TOOL 9067A SERIAL NUME	ATION 2990 08/12/07 : TM VERSION 1 3EP 529	23:02				
DATE	TIME	SENSOR	STA	ANDARD	RE	SPONSE
Sep03,06	10:46:48	GAMMA	1.000	[API-GR]	1.00	[CPS]
Sep03.06	10:46:48	GAMMA	250.000	API-GR	80.00	[CPS]
Sep03,06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
Sep03,06	10:47:15	NEUTRON	500.000	API-N j	500.00	[CPS]



* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * * * CLIENT : ELK VALLEY COAL COR HOLE ID. : 2990 FIELD OFFICE : PENHOLD DATE OF LOG : 08/14/07 DATA FROM : N/A PROBE : 9057A , 1067 MAG. DECL. : 17.000 DEPTH UNITS : METERS LOG: 2990_08-14-07_09-57_9057A_.02_8.17_307.22_DEVI.log CABLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AZIMUTH SANG SANGB 10.00 9.99 -0.00 0.00 162.0 0.5 152.2 00.00 10.00 0.1 115.7 0.8 82.6

20.00	TA'AA		0.10	0.1	II9./	0.0	02.0	
30.00	29.99	-0.01	0.32	0.3	91.7	1.7	76.5	
40.00	39.98	0.10	0.59	0.6	80.0	1.5	47.4	
50.00	49.98	0.21	0.64	0.7	71.5	0.3	343.3	
60.00	59.98	0.20	0.67	0.7	73.7	1.2	105.1	
70.00	69.98	0.18	0.85	0.9	77.8	0.8	126.0	
80.00	79.98	0.10	1.01	1.0	84.5	0.8	144.5	
90.00	89.98	-0.02	1.16	1.2	90.9	0.7	80.1	
100.00	99.97	-0.10	1.03	1.0	95.6	1.5	239.5	
110.00	109.97	-0.35	0.85	0.9	112.3	1.5	207.8	
120.00	119.96	-0.63	0.89	1.1	125.3	2.4	159.0	
130.00	129.95	-1.10	1.22	1.6	131.9	3.7	141.8	
140.00	139.91	-1.75	1.83	2.5	133.7	6.5	137.5	
150.00	149.80	-2.67	2.93	4.0	132.4	9.5	122.8	
160.00	159.64	-3.66	4.41	5.7	129.7	10.9	118.9	
170.00	169.46	-4.61	6.02	7.6	127.5	10.4	118.7	
180.00	179.27	-5.58	7.69	9.5	126.0	10.9	121.3	
190.00	189.10	-6.56	9.25	11.3	125.4	10.0	122.9	
200.00	198.97	-7.49	10.55	12.9	125.4	8.6	129.5	
210.00	208.89	-8.37	11.53	14.2	126.0	6.7	132.9	
220.00	218.82	-9.18	12.27	15.3	126.8	6.1	139.8	
230.00	228.78	-9.96	12.68	16.1	128.1	4.8	164.3	
240.00	238.75	-10.76	13.01	16.9	129.6	5.8	155.1	
250.00	248.68	-11.87	13.32	17.8	131.7	7.4	186.6	
260.00	258.59	-13.17	13.43	18.8	134.4	7.3	176.3	
270.00	268.51	-14.42	13.46	19.7	137.0	7.6	186.4	
280.00	278.43	-15.72	13.30	20.6	139.8	7.5	192.0	
290.00	288.34	-16.95	12.96	21.3	142.6	8.1	214.6	
300.00	298.26	-18.09	12.49	22.0	145.4	9.4	198.9	
307.04	305.21	-19.12	12.10	22.6	147.7	9.7	200.5	





1:200 SLIM GAMMA NEUTRON



2991



08/15/07



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0entri		SLIM GAMMA-NEUTRON
WIRELINE SER	WICES	2991
COMPANY	ELK VALLE	Y COAL
WELL	2991	OTHER SERVICES
FIELD	FORDING F	RIVER OPERATIONS
COUNTRY	CANADA	AC76
PROVINCE	ALBERTA	
LOCATION	N/A	
SECTION	N/A	
TOWNSHIP	1N/A	
RANGE	N/A	
LICENCE NO.	1/A	
UNIQUE WELL ID.	NIA	
PERMANENT DATUM	GL	ELEVATION KB N/A
LOG MEASURED FROM	N.GL	ELEVATION DF N/A
DRL MEASURED FROM	1 OL	ELEVATION GL NIA
DATE	08/15/07	
DEPTH DRILLER	264	
BIT SIZE	:13	
LOG TOP	0.32	
LOG BOTTOM	261.80	
CASING LOGGER	N/A	
CASING DRILLER	ώ	
CASING TYPE	N/A	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	NA	
MUD RES	NIA	
MUD WEIGHT	:1.0	
WITNESSED BY	N/A	
RECORDED BY	B. BERINGE	ER
REMARKS 1	••	
REMARKS 2	••	
ALL SER	VICES PROV	IDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2991 08/15/07

LOG PARAMETERS

MATRIX DENSITY : 2.65NEUTRON MATMAGNETIC DECL : 17ELECT. CUTOFIPRESENTATION NAME/DATE =9067A.008/14/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 67A.0 08/14/2007 MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK V



1:200 SLIM GAMMA NEUTRON 2991 08/15/07





* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. : 2	991
FIELD OFFICE	: PENHOLD	DATE OF LOG : 0	8/17/07
data from	: N/A	PROBE : 9	057 A , 1067

MAG. DECL. : 17.000 DEPTH UNITS : METERS LOG: 2991_08-17-07_19-04_9057A_.02_11.85_234.34_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	<u>east</u> dev.	DISTANCE	AZIMUTH	SANG SI	ANGB
13.62	13. 61	-0.00	0.00	0.0	120.2	0.5	120.2
22.00	21.99	-0.07	0.08	0.1	130.0	0.9	136.9
32.00	31.99	-0.20	0.21	0.3	133.8	1.3	136.1
42.00	41.98	-0.37	0.45	0.6	129.3	1.7	128.8
52.00	51.98	-0.47	0.65	0.8	125.7	0.9	112.4
62.00	61.98	-0.49	0.73	0.9	124.0	0.2	133.4
72.00	71.98	-0.56	0.77	0.9	125.9	0.9	170.7
82.00	81.98	-0.70	0.86	1.1	129.4	1.6	123.2
92.00	91.97	-0.91	1.11	1.4	129.5	2.4	124.5
102.00	101.95	-1.18	1.67	2.0	125.2	4.3	109.0
112.00	111.93	-1.43	2.34	2.7	121.5	4.2	116.1
122.00	121.90	-1.70	2.94	3.4	120.0	4.0	123.4
132.00	131.88	-1.98	3.53	4.1	119.2	3.4	115.6
142.00	141.86	-2.26	4.06	4.6	119.1	3.3	122.8
152.00	151.85	-2.55	4.55	5.2	119.3	3.3	119.7
162.00	161.83	-2.85	5.04	5.8	119.5	3.2	121.4
172.00	171.82	-3.13	5.54	6.4	119.5	3.2	121.2
182.00	181.80	-3.38	5.96	6.9	119.6	2.5	117.9
192.00	191.80	-3.57	6.22	7.2	119.9	2.0	127.7
202.00	201.79	-3.81	6.45	7.5	120.6	2.0	130.1
212.00	211.78	-4.07	6.77	7.9	121.0	2.8	128.5
222.00	221.77	-4.35	7.07	8.3	121.6	1.7	132.1
232.00	231.77	-4.56	7.27	8.6	122.1	1.9	153.3
234.16	233.93	-4.62	7.31	8.6	122.3	2.3	145.3



UDITIONS	VIDED SUBJECT TO STANDARD TERMS AND CON	RVICES PROV	REMARKS 2 ALL SEF
		••	REMARKS 1
	ER	:B. Bering	RECORDED BY
		NIA	WITNESSED BY
		3.0	MUD WEIGHT
		NIA	MUD RES
		N/A	RM TEMPERATURE
		WATER	BOREHOLE FLUID
		N/A	CASING TYPE
		స	CASING DRILLER
		N/A	CASING LOGGER
		303.81	LOG BOTTOM
		0.39	LOG TOP
·		:13	BIT SIZE
		306	DEPTH DRILLER
		08/16/07	DATE
	ELEVATION GL N/A	M GL	DRL MEASURED FRO
	ELEVATION DF N/A	M.GL	LOG MEASURED FRO
	ELEVATION KB N/A	Ъ Ч	PERMANENT DATUM
		NIA	UNIQUE WELL ID.
-		NA	LICENCE NO.
		1N/A	RANGE
		N/A	TOWNSHIP
		NIA	SECTION
		1N/A	LOCATION
		ALBERTA	PROVINCE
		CANADA	COUNTRY
9057	RIVER OPERATIONS	FORDING	FIELD
9067		2992	WELL
	EY COAL	ELK VALLE	COMPANY
	2992	RVICES	WIRELINE SEI
TRON	SLIM GAMMA-NEU		Centu

1:200 SLIM GAMMA NEUTRON 2992 08/16/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17

PRESENTATION NAME/DATE = 9067A.0 08/14/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK





	TOOL CALIBR TOOL 9067A SERIAL NUMI	ATION 2992 08/16/07 2 TM VERSION 1 BER 529	22:16				
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1	Sep03,06	10:46:48	GAMMA	1.000	[API-GR]	1.00	[CPS]
	Sep03,06	10:46:48	GAMMA	250.000	[API-GR]	80.00	[CPS]
2	Sep03,06	10:47:15	NEUTRON	1.000	[API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500.000	(API-N)	500.00	[CPS]



CLIENT: ELK VALLEY COAL LOCATION: FORDING RIVER OPERATIONS HOLE ID: 2992 DATE OF LOG: 08/17/07 PROBE: 9057A 1067 MAG DECL: 17.0

SCALE: 1 M/CM TRUE DEPTH: 298.35 M AZIMUTH: 168.2 DISTANCE: 6.2 M + = 50 M INCR $^{\circ}$ = BOTTOM OF HOLE



* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. : 2992
FIELD OFFICE	: PENHOLD	DATE OF LOG : 08/17/07
DATA FROM	: N/A	PROBE : 9057A , 1067
MAG. DECL.	: 17.000	DEPTH UNITS : METERS
LOG: 2992_08-	-17-07_20-44_9057A02_	25.00_298.90_DEVI.log

CABLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AZIMUTH SANG SANGB

25.02	25.02	0.00	-0.00	0.0	347.0	1.7	347.0
35.00	34.99	0.45	-0.16	0.5	340.5	3.8	337.4
45.00	44.97	1.02	-0.46	1.1	335.8	3.5	332.7
55.00	54.95	1.54	-0.71	1.7	335.4	2.8	334.0
65.00	64.94	1.95	-0.80	2.1	337.8	2.0	358.7
75.00	74.94	2.23	-0.80	2.4	340.2	1.3	346.5
85.00	84.94	2.39	-0.89	2.6	339.7	0.6	305.1
95.00	94.93	2.44	-0.94	2.6	338.9	0.2	155.5
105.00	104.93	2.49	-0.83	2.6	341.5	1.2	54.2
115.00	114.93	2.61	-0.66	2.7	345.8	1.2	66.0
125.00	124.93	2.68	-0.44	2.7	350.6	1.3	64.9
135.00	134.93	2.76	-0.33	2.8	353.2	0.3	335.3
145.00	144.93	2.74	-0.35	2.8	352.7	0.6	191.9
155.00	154.93	2.61	-0.30	2.6	353.5	1.0	131.0
165.00	164.92	2.42	-0.17	2.4	355.9	1.5	159.4
175.00	174.92	2.11	-0.09	2.1	357.6	2.2	160.8
185.00	184.90	1.58	0.15	1.6	5.3	3.6	155.2
195.00	194.88	0.99	0.40	1.1	22.1	3.6	157.4
205.00	204.86	0.46	0.58	0.7	51.5	2.6	182.0
215.00	214.85	-0.11	0.66	0.7	99.6	3.8	172.4
225.00	224.82	-0.77	0.77	1.1	135.3	4.1	168.7
235.00	234.80	-1.47	0.85	1.7	150.0	4.2	175.7
245.00	244.77	-2.22	0.89	2.4	158.1	4.2	182.1
255.00	254.74	-2.97	0.90	3.1	163.1	4.9	173.8
265.00	264.71	-3.74	0.95	3.9	165.7	4.6	176.6
275.00	274.68	-4.48	1.09	4.6	166.4	4.5	181.0
285.00	284.66	-5.11	1.14	5.2	167.5	3.9	171.5
295.00	294.64	-5.77	1.22	5.9	168.0	3.6	165.1
298.72	298.35	-6.03	1.26	6.2	168.2	4.6	166.8

Centu	COMPENSATED DENSITY GAMMA-CALIPER-RES
	Zyy3
COMPANY	ELK VALLEY COAL OTHER SERVICES:
WELL	2993
FIELD	FORDING RIVER OPERATIONS
COUNTRY	CANADA
PROVINCE	ALBERTA
LOCATION	NA
SECTION	NA
TOWNSHIP	NA
RANGE	ANV.
LICENCE NO.	NA
UNIQUE WELL ID.	NVA
PERMANENT DATUM	GL ELEVATION KB N/A
LOG MEASURED FROM	AGL ELEVATION DF N/A
DRL MEASURED FROM	A GL ELEVATION GL N/A
DATE	D8/15/07
DEPTH ORILLER	282
BIT SIZE	.13.00
LOG TOP	0.43
LOG BOTTOM	281.64
CASING LOGGER	NA
CASING DRILLER	23
CASING TYPE	N/A .
BOREHOLE FLUID	MATER
RM TEMPERATURE	NA
MUD RES	N/A
MUD WEIGHT	1.0
WITNESSED BY	NIA
RECORDED BY	B. BERINGER
REMARKS 1	
REMARKS 2	
ALL SEP	NICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS
REMARKS Z	VICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS





ONDITIONS	OVIDED SUBJECT TO STANDARD TERMS AND CO	: RVICES PR	REMARKS 2 ALL SEI
			REMARKS 1
	IGER	B. BERIN	RECORDED BY
		N/A	WITNESSED BY
		1.0	MUD WEIGHT
		NIA	MUD RES
		NIA	RM TEMPERATURE
		MATER	BOREHOLE FLUID
		N/A	CASING TYPE
		3	CASING DRILLER
		N/A	CASING LOGGER
		279.85	LOG BOTTOM
		0.39	LOG TOP
		13	BIT SIZE
		282	DEPTH DRILLER
		D&14/07	DATE
	ELEVATION GL N/A	M GL	DRL MEASURED FROM
	ELEVATION DF N/A	M.GL	LOG MEASURED FRO
	ELEVATION KB N/A	Ъ.	PERMANENT DATUM
		NA	UNIQUE WELL ID.
		NA	LICENCE NO.
		N/A	RANGE
		NA	TOWNSHIP
		NIA	SECTION
		NIA	LOCATION
		ALBERT/	PROVINCE
		CANADA	COUNTRY
9057	3 RIVER OPERATIONS	FORDING	FIELD
9239		2993	WELL
OTHER SERVICES	LEY COAL	ELK VAL	COMPANY
	2993	(MCES	WIRELINE SER
JTRON	SLIM GAMMA-NEU		Ont.

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XOL CALIBR XOL 9067A ERIAL NUMI	ATION 2993 08/14/07 08:52 TM VERSION 1 BER 529					
DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
Sep03,06 Sep03,06 Sep03,06 Sep03,06	10:46:48 10:46:48 10:47:15 10:47:15	GAMMA GAMMA NEUTRON NEUTRON	1.000 250.000 1.000 500.000	[API-GR] [API-GR] [API-N] [API-N]	1.00 80.00 1.00 500.00	[CPS] [CPS] [CPS] [CPS]

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 $e^{i(x_{1},x_{2},x_{1},x_{2}$

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SCALE: 5 M/CM CLIENT: ELK VALLEY COAL LOCATION: FORDING RIVER OPERATIONS TRUE DEPTH: 277.25 M AZIMUTH: 78.9 HOLE ID: 2993 DATE OF LOG: 08/15/07 DISTANCE: 37.9 M PROBE: 9057A 1067 + = 20 M INCR MAG DECL: 17.0 \circ = bottom of hole N_40.0M _30.0M 20.0M 10.0M W E S

* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. : 2993
FIELD OFFICE	: PENHOLD	DATE OF LOG : 08/15/07
DATA FROM	: N/A	PROBE : 9057A , 1067
MAG. DECL.	: 17.000	DEPTH UNITS : METERS
LOG: 2993_08-	-15-07_16-39_9057 A 02_	10.00_281.13_DEVI.log

CABLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AZIMUTH SANG SANGB

10.02	10.02	-0.00	0.00	0.0	130.1	0.6	130.1
20.00	20.00	-0.07	0.15	0.2	115.3	1.8	112.4
30.00	29.99	-0.14	0.48	0.5	106.3	2.3	99.4
40.00	39.98	-0.21	0.91	0.9	103.2	2.9	98.3
50.00	49.97	-0.29	1.39	1.4	101.8	2.9	95.8
60.00	59.96	-0.29	1.78	1.8	99.2	2.1	75.9
70.00	69.96	-0.25	2.14	2.2	96.5	2.3	77.7
80.00	79.95	-0.18	2.55	2.6	94.0	2.9	83.2
90.00	89.93	-0.02	3.10	3.1	90.4	3.6	73.3
100.00	99.91	0.23	3.65	3.7	86.3	3.3	58.2
110.00	109.88	0.54	4.35	4.4	82.9	4.9	65.7
120.00	119.84	0.91	5.16	5.2	80.0	4.9	67.8
130.00	129.79	1.33	6.11	6.3	77.7	7.1	67.8
140.00	139.70	1.79	7.37	7.6	76.3	8.2	71.6
150.00	149.58	2.22	8.80	9.1	75.9	9.2	75.2
160.00	159.44	2.62	10.45	10.8	75.9	10.0	76.8
170.00	169.28	2.98	12.21	12.6	76.3	10.6	78.3
180.00	179.10	3.35	14.04	14.4	76.6	10.9	78.4
190.00	188.90	3.73	15.98	16.4	76.8	11.3	79.2
200.00	198.70	4.13	17.95	18.4	77.0	12.2	79.0
210.00	208.46	4.54	20.08	20.6	77.3	12.8	79.9
220.00	218.20	4.92	22.29	22.8	77.6	13.0	79.9
230.00	227.93	5.35	24.58	25.2	77.7	13.4	79.6
240.00	237.65	5.75	26.88	27.5	77.9	13.6	80.6
250.00	247.36	6.15	29.25	29.9	78.1	14.1	81.2
260.00	257.04	6.54	31.72	32.4	78.3	15.0	80.7
270.00	266.70	6.93	34.28	35.0	78.6	15.7	82.4
280.00	276.33	7.27	36.97	37.7	78.9	15.8	83.1
280.96	277.25	7.29	37.23	37.9	78.9	16.1	84.1

Penti		SLIM GAMMA-NEUTRON	Z
WIRELINE SER	MICES	2994	
COMBANY		VICAL CORPORATION	
WELL	2994		R SERVICES;
FIELD	FORDING	RIVER OPERATIONS 9139	
COUNTY	CANADA		
STATE	BC		
LOCATION	N/A		
SECTION	N/A		
TOWNSHIP	NIA		
RANGE	N/A		
API NO.	NIA		
UNIQUE WELL ID.	NIA		
PERMANENT DATUM	<u>io</u>	ELEVATION KB N/A	
LOG MEASURED FROM	MGL	ELEVATION DF N/A	
DRL MEASURED FROM	M.GL	ELEVATION GL N/A	
DATE	:08/29/07		
DEPTH DRILLER	282		
BIT SIZE	:13		
LOG TOP	.0.19		
LOG BOTTOM	279.83		
CASING OD	N/A		
CASING BOTTOM	ω		
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	:1.0		
WITNESSED BY	SDS DRILL	ING	
RECORDED BY	BLAYLOCK		
REMARKS 1	HOLE BRID)GED AT 411	
REMARKS 2			
ALL SEF	RVICES PROV	IDED SUBJECT TO STANDARD TERMS AND CONDITIONS	

1:200 SLIM GAMMA NEUTRON 2994 08/29/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00

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NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64ED

1:200 SLIM GAMMA NEUTRON 2994 08/29/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL . 17.00 PRESENTATION NAME/DATE = 9067A.0 07/04/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF 99999 MATRIX DELTA T : 177 BIT SIZE 13 VERSION = 3.64ED

-	TOOL CALIBR TOOL 9067A SERIAL NUMI	ATION 2994 08/29/07 12:49 TM VERSION 1 BER 530	Э				
	DATE	TIME	SENSOR	STA	ANDARD	RE	SPONSE
1	Jul20,07	01:44:30	GAMMA	1.000	[API-GR]	1.00	[CPS]
	Jul20.07	01:44:30	GAMMA	250.000	[API-GR]	52.00	[CPS]
2	Sep03.06	10:47:15	NEUTRON	1.000	TAPI-N 1	1.00	[CPS]
-	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]
L							

PLAN VIEW COMPU-LOG DEVIATION

CLIENT: ELK VALLEY COAL CORPORATION SCALE: 5 M/CM LOCATION: FORDING RIVER OPERATIONS TRUE DEPTH: 279.34 M HOLE ID: 2994 AZIMUTH: 268.9 DATE OF LOG: 08/30/07 DISTANCE: 30.3 M PROBE: 9057A 1067 + = 20 M INCRMAG DECL: 17.0 \circ = Bottom of Hole N_{40.0M} 30.0M 20.0M 10.QM W E

CLIENT: ELK VALLEY COAL CORHOLE ID.: 2994FIELD OFFICE: PENHOLDDATE OF LOG: 08/30/07DATA FROM: N/APROBE: 9057A, 1067MAG. DECL.: 17.000DEPTH UNITS: METERSLOG:2994_08-30-07_11-08_9057A_.02_1.68_281.70_DEVI.log

* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CABLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AZIMUTH SANG SANGB

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5.00	5.00	0.00	-0.01	0.0	305.2	0.5	304.4
15.00	15.00	0.00	-0.15	0.2	270.2	0.9	262.3
25.00	24.99	-0.02	-0.43	0.4	267.5	2.4	263.9
35.00	34.98	-0.16	-0.96	1.0	260.7	3.2	253.5
45.00	44.97	-0.39	-1.34	1.4	253.8	2.3	234.5
55.00	54.96	-0.61	-1.75	1.9	250.8	2.2	230.1
65.00	64.95	-0.81	-1.96	2.1	247.6	1.0	203.1
75.00	74.95	-0.96	-2.16	2.4	246.0	2.0	233.3
85.00	84.94	-1.15	-2.50	2.7	245.3	2.7	247.8
95.00	94.93	-1.32	-3.00	3.3	246.3	3.4	258.6
105.00	104.90	-1.47	-3.68	4.0	248.2	4.7	265.7
115.00	114.87	-1.65	-4.50	4.8	249.9	5.9	265.5
125.00	124.78	-1.66	-5.81	6.0	254.1	8.0	269.7
135.00	134.67	-1.63	-7.28	7.5	257.4	8.7	267.8
145.00	144.55	-1.61	-8.82	9.0	259.7	8.5	271.4
155.00	154.45	-1.57	-10.26	10.4	261.3	9.1	270.5
165.00	164.34	-1.52	-11.69	11.8	262.6	7.7	272.5
175.00	174.25	-1.45	-13.08	13.2	263.7	8.2	273.9
185.00	184.14	-1.37	-14.54	14.6	264.6	8.7	277.5
195.00	194.03	-1.33	-16.01	16.1	265.3	8.3	273.0
205.00	203.92	-1.30	-17.44	17.5	265.7	8.8	273.4
215.00	213.80	-1.26	-18.99	19.0	266.2	9.2	271.3
225.00	223.67	-1.21	-20.62	20.7	266.7	9.6	275.3
235.00	233.52	-1.15	-22.31	22.3	267.0	9.8	271.5
245.00	243.36	-1.10	-24.10	24.1	267.4	10.4	273.8
255.00	253.19	-0.99	-25.94	26.0	267.8	10.8	272.9
265.00	263.03	-0.87	-27.71	27.7	268.2	9.8	273.3
275.00	272.90	-0.73	-29.31	29.3	268.6	8.8	282.5
281.52	279.34	-0.61	-30.30	30.3	268.8	9.1	277.3

IDGED AT 411	SOS DRH BLAYLOC HOLE BR	WTNESSED BY RECORDED BY REMARKS 1 REMARKS 2
	2 170 2 170 2 19 2 19 2 19 2 173,73 10 173,73 10 173,73 10 173,73 10 174,73 10 174,73 10 10 10 10 10 10 10 10 10 10 10 170 17	DATE DEPTH DRILLER BIT SIZE LOG TOP LOG BOTTOM CASING BOTTOM CASING BOTTO CASING BOTTO CASING TYPE BOREHOLE FLU RM TEMPERATU MUD RES MUD WEIGHT
ELEVATION KB NJA ELEVATION DF NJA ELEVATION GL NJA	N/A N/A N/A N/A D. N/A D. N/A D. ROM.SL D FROM.SL	LOCATION SECTION TOWNSHIP RANGE RANGE API NO. UNIQUE WELL I PERMANENT DI LOG MEASUREI DRL MEASUREI
COMPENSATED DENSITY GAMMA-CALIPER-RES 2995 GRIVER OPERATION GRIVER OPERATION GRIVER OPERATION GRIVER OPERATION GRIVER OPERATION S057 S057 S057	ELK VAL	COMPANY RELL FIELD COUNTY

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX: SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

MATRIX DELTA T: 177 BIT SIZE : 13.00

VERSION = 3.64EK

CALIPERL METERS RES(SG) -3 СМ 17 Ø OHM-M 30000 GAMMA DEN(CDL) 0 API-GR 140 p Jr G/CC 2 ٤ ~ 2 10 L

Pentii	SLIM GAMMA-NEUTRON
WIRELINE SER	2995
COMPANY	ELK VALLEY COAL CORPORATION
WELL	2995 01HER SEKVR
FIELD	FORDING RIVER OPERATIONS
COUNTY	CANADA
STATE	BC
LOCATION	N/A
SECTION	N/A
TOWNSHIP	NIA
RANGE	NA
APINO	NIA
UNIQUE WELL ID.	N/A
PERMANENT DATUM	GL ELEVATION KB N/A
LOG MEASURED FROM	M GL ELEVATION DF N/A
DRL MEASURED FROM	M GL ELEVATION GL N/A
DATE	08/30/07
DEPTH DRILLER	170
BIT SIZE	.13
LOG TOP	0.12
LOG BOTTOM	.172.19
CASING OD	NIA
CASING BOTTOM	υ
CASING TYPE	STEEL
BOREHOLE FLUID	WATER
RM TEMPERATURE	MA
MUD RES	N/A
MUD WEIGHT	1.0
WTNESSED BY	SDS DRILLING
RECORDED BY	BLAYLOCK
REMARKS 1	HOLE BRIDGED AT 411
REMARKS 2	
ALL SEP	RVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

1:200 SLIM GAMMA NEUTRON 2995 08/30/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A_530.0 08/25/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13 VERSION = 3.64EK

1:200 SLIM GAMMA NEUTRON 2995 08/30/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9067A_530.0 08/25/2007

MATRIX DELTA T: 177 : 13 BIT SIZE VERSION = 3.64EK

TOOL CALIBRATION 2995 08/30/07 10:23 TOOL 9067A TM VERSION 1 ŀ SERIAL NUMBER 530 RESPONSE DATE TIME SENSOR STANDARD [API-GR] 1.00 [CPS] Jul20,07 01:44:30 GAMMA 1.000 1 [CPS] [CPS] [CPS] [API-GR] 52.00 Jul20,07 01:44:30 GAMMA 250.000 [API-N] 10:47:15 NEUTRON 1.000 1.00 $\overline{2}$ Sep03,06 500.00 Sep03,06 10:47:15 NEUTRON 500.000 [API-N]

(-1) = (-1) +

PLAN VIEW COMPU-LOG DEVIATION

CLIENT: ELK VALLEY COAL CORPORATION LOCATION: FORDING RIVER OPERATIONS HOLE ID: 2995 DATE OF LOG: 08/31/07 PROBE: 9057A 1067

MAG DECL: 17.0

SCALE: 2 M/CM TRUE DEPTH: 173.16 M AZIMUTH: 347.3 DISTANCE: 8.8 M + = 20 M INCR \circ = bottom of hole

CLIENT	ELK VALLEY COAL COR HOLE ID. : 2995	
FIELD OFFICE	PENHOLD DATE OF LOG : 08/31/07	
DATA FROM	: N/A PROBE : 9057A , 10	67
MAG. DECL.	DEPTH UNITS : METERS	
LOG: 2995_08-	31-07_09-58_9057A02_2.21_173.63_DEVI.log	

				_		
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG SANGB
5.00	4.99	0.01	0.01	0.0	30.5	1.3 38.5
15.00	14.99	0.17	0.13	0.2	37.9	1.0 48.0
25.00	24.99	0.30	0.23	0.4	38.2	1.3 15.9
35.00	34.98	0.54	0.28	0.6	27.5	1.6 7.1
45.00	44.98	0.78	0.34	0.8	23.4	1.0 8.5
55.00	54.98	1.06	0.34	1.1	17.8	2.3 349.4
65.00	64.97	1.50	0.25	1.5	9.3	3.1 345.8
75.00	74.95	2.08	0.04	2.1	1.1	4.4 335.9
85.00	84.92	2.75	-0.27	2.8	354.5	3.9 338.2
95.00	94.89	3.41	-0.57	3.5	350.5	4.0 336.0
105.00	104.86	4.12	-0.88	4.2	347.9	4.4 335.6
115.00	114.83	4.89	-1.20	5.0	346.2	4.8 340.0
125.00	124.79	5.64	-1.47	5.8	345.4	4.4 340.6
135.00	134.77	6.37	-1.71	6.6	344.9	3.6 332.1
145.00	144.75	6.86	-1.97	7.1	344.0	2.6 349.4
155.00	154.73	7.44	-1.98	7.7	345.1	3.5 0.6
165.00	164.71	8.05	-1.95	8.3	346.4	3.7 2.2
173.46	173.16	8.55	-1.92	8.8	347.3	3.7 5.4

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* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY COAL	COR HOLE ID. :	2996
FIELD OFFICE	: PENHOLD	DATE OF LOG :	09/04/07
DATA FROM	: N/A	PROBE :	9057 a , 1067
MAG. DECL.	: 17.000	DEPTH UNITS :	METERS
LOG: 2996 09-	-04-07 19-02 9057A	.02 5.40 592.28 DEV	T.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	ANGB
10.00	10.00	0.09	-0.04	0.1	334.0	2.5	327.9
20.00	19.99	0.43	-0.31	0.5	324.1	3.1	301.0
30.00	29.98	0.64	-0.67	0.9	313.8	2.6	302.8
40.00	39.97	1.06	-0.92	1.4	319.1	2.8	331.9
50.00	49.95	1.49	-1.14	1.9	322.6	2.6	333.9
60.00	59.95	1.75	-1.33	2.2	322.9	1.4	321.5
70.00	69.95	1.95	-1.42	2.4	324.0	1.5	7.0
80.00	79.94	2.20	-1.32	2.6	329.0	2.0	39.4
90.00	89.93	2.47	-1.06	2.7	336.8	2.4	47.2
100.00	99.92	2.72	-0.62	2.8	347.2	4.2	69.5
110.00	109.89	2.96	0.11	3.0	2.1	4.8	75.3
120.00	119.85	3.16	1.01	3.3	17.7	5.7	77.5
130.00	129.80	3.27	1.96	3.8	30.9	5.4	90.7
140.00	139.75	3.32	3.00	4.5	42.1	6.7	84.5
150.00	149.67	3.42	4.20	5.4	50.9	6.9	87.0
160.00	159.59	3.47	5.47	6.5	57.6	8.0	91.1
170.00	169.48	3.51	6.94	7.8	63.2	8.8	89.9
180,00	179.36	3.52	8.50	9.2	67.5	9.7	88.3
190.00	189.20	3,60	10.25	10.9	70.7	10.4	83.8
200.00	199.02	3.73	12.14	12.7	72.9	11.7	84.5
210.00	208.82	3.90	14.15	14.7	74.6	11.8	64.0
220.00	218.59	4.06	16.26	16.8	76.0	12.8	87.4
230.00	228.32	4.13	18.56	19.0	77.4	13.7	87.5
240.00	238.03	4.11	20.90	21.4	78.9	18.1	91.0
250.00	247.70	4.02	23.50	23.0 06 E	80.3	15.2	93.I
200.00	257.33	3.00	20.19	20.3	01.0	16 0	93.2 05 4
270.00	200.33	3.03	20.33	22 1	84 0	19.0	95.9
200.00	206 00	3.33	34 97	35.1	85.2	17 7	98 0
290.00	265.00	2.53	37.97	38.1	86.2	17.6	99.2
310 00	305.05	2.03	40.99	41.0	87.2	18.3	99.5
320.00	314.55	1.48	44.06	44.1	88.1	18.4	101.6
330.00	324.04	0,86	47.14	47.2	89.0	18.6	101.7
340.00	333.50	0.16	50.33	50.3	89.8	19.3	102.5
350.00	342.91	-0.64	53.59	53.6	90.7	20.1	103.9
360.00	352.32	-1.44	56.89	56.9	91.4	19.8	103.5
370.00	361.72	-2.24	60.22	60.3	92.1	20.5	104.7
380.00	371.05	-3.11	63.69	63.8	92.8	21.2	103.9
390.00	380.35	-4.02	67.25	67.4	93.4	22.1	105.6
400.00	389.60	-5.07	70.90	71.1	94.1	22.7	106.1
410.00	398.79	-6.29	74.65	74.9	94.8	23.9	108.6
420.00	407.90	-7.60	78.56	78.9	95.5	24.9	107.1
430.00	416.95	-8.86	82.62	83.1	96.1	25.4	106.2
440.00	425.94	-10.08	86.82	87.4	96.6	26.7	105.6
450.00	434.84	-11.32	91.22	91.9	97.1	27.3	104.6
460.00	443.72	-12.59	95.57	96.4	97.5	28.3	104.2
470.00	452.49	-13.77	100.23	101.2	97.8	29.1	103.4
480.00	401.17	-16.93	110.05	111 J	90.L	30.2	104.4
	400 10	-10.23	115 30	116 6	20.1	34.3	104.9
500.00	4/8/13 406 40	-10 00	120 41	100.0	30./ 60 6	34 0	104.3
510.00	1100.113 101.115	-20.30	10£ 10	466.4 197 0	20.9 QQ 9	35 A	103.7
520.00	333.14 500 70	20.3/	121 80	122.7	99.2 99 A	37.2	102.7
540 00	510 KE	-23.05	137.90	139.Ř	99.5	38.4	102.3
550.00	510.00	-24 92	144.11	146.1	99.6	39.3	102.0
560.00	526.09	-25.54	150.36	152.5	99.6	39.7	100.2
570.00	533.74	-26.67	156.70	158.9	99.7	41.5	96.5
580.00	541.24	-27.77	163.23	165.6	99.7	42.4	99.7
590.00	548.55	-28.93	169.94	172.4	99.7	43.9	99.7
592.10	550.08	-29.17	171.36	173.8	99.7	43.6	99.4

Opent.	¥.	SLIM GAMMA-NEU	TRON
MIRELINE SER	MCES	2997	
	-	n	
COMPANY	ELK VALLEY COAL	CORPORATION	
WELL	2997		9057
FIELD	FORDING RIVER (OPERATIONS	9139
COUNTY	CANADA		
STATE	BC		
LOCATION	A/N		
SECTION	NIA		
TOWNSHIP	N/A		
RANGE	NA		3
API NO.	NIA		
UNIQUE WELL ID.	N/A		
PERMANENT DATUM	GL	ELEVATION KB N/A	
LOG MEASURED FROM	MGL	ELEVATION DF N/A	
DRL MEASURED FROM	N.GL	ELEVATION GL N/A	
DATE	08/27/07		
DEPTH ORILLER	330		
BIT SIZE	:13		
LOG TOP	-0.03		
LOG BOTTOM	329.13		
CASING OD	N/A		
CASING BOTTOM			
CASING TYPE	STEEL		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	NA		
MUD RES	N/A		
MUD WEIGHT	:1.0		
WITNESSED BY	SDS DRILLING		
RECORDED BY	BLAYLOCK		
REMARKS 1	• •		

1:200 SLIM GAMMA NEUTRON 2997 08/27/07

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A_530 0 08/25/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

LOG PARAMETERS

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

TOOL CALIBRATION 2997 08/27/07 08:47 TOOL 9067A TM VERSION 1 SERIAL NUMBER 530 DATE TIME 01:44:30 Jul20,07 Jul20,07 01:44:30 10:47:15

10:47:15

SENSOR	ST
GAMMA	1.000
GAMMA	250.000
NEUTRON	1.000
NEUTRON	500.000

ANDARD [API-GR] [API-GR] [API-N] [API-N]

RESPONSE [CPS] 1.00 [CPS] 52.00 [CPS] [CPS] 1.00 500.00

.

Sep03,06

Sep03,06

1

2

SCALE: 2 M/CM CLIENT: ELK VALLEY COAL CORPORATION LOCATION: FORDING RIVER OPERATIONS TRUE DEPTH: 328.18 M HOLE ID: 2997 AZIMUTH: 49.9 DATE OF LOG: 08/28/07 DISTANCE: 7.5 M PROBE: 9057A 1067 + = 50 M INCRMAG DECL: 17.0 \circ = bottom of hole **N**_{16.0M} _12.0M 8.0M _4.0M⁄ W E S

* * * * * *	* COMPU-LOG	- VERTICAL	DEVIATION *	* * * * *	*		
CLIENT FIELD OFFI DATA FROM MAG. DECL LOG: 2997	: ELK VA ICE : PENHOL : N/A . : 17.0 _08-28-07_21	LLEY COAL CO D 00 -49_9057A0	R HOLE ID Date of Probe Depth u 2_2.75_329.	0. : 299 'LOG : 08/ : 905 NITS : MET 60_DEVI.lo	7 28/07 7a , Ers g	1067	
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	ANGB
5.00	4.99	0.00	0.00	0.0	68.7	0.4	65.8
15.00	14.99	0.00	0.07	0.1	87.7	0.4	85.0
25.00	24.99	-0.03	0.14	0.1	101.1	0.6	173.9

35.00	34,99	-0,10	0.16	0.2	122.4	0.3	185.7	
45.00	44.99	-0.10	0.16	0.2	123.0	0.2	70.3	
55.00	54.99	-0.17	0.21	0.3	128.8	1.1	130.3	
65.00	64.99	-0.24	0.29	0.4	129.2	0.2	150.8	
75.00	74.99	-0.20	0.30	0.4	124.1	0.4	308.0	
85.00	84.99	-0.08	0.18	0.2	114.6	1.9	321.5	
95.00	94.97	0.33	-0.10	0.3	343.1	3.6	327.8	
105.00	104.94	0.97	-0.51	1.1	332.2	5.1	328.1	
115.00	114.90	1.78	-1.06	2.1	329.3	5.6	325.5	
125.00	124.85	2.54	-1.56	3.0	328.4	4.8	332.3	
135.00	134.82	3.28	-2.02	3.8	328.4	5.2	327.7	
145.00	144.78	4.03	-2.47	4.7	328.5	5.1	331.3	
155.00	154.74	4.78	-2.88	5.6	329.0	4.7	334.1	
165.00	164.71	5.52	-3.20	6.4	329.9	4.6	336.7	
175.00	174.68	6.28	-3.48	7.2	331.0	4.5	342.9	
185.00	184.65	7.00	-3.66	7.9	332.4	4.1	348.9	
195.00	194.62	7.74	-3.77	8.6	334.0	4.6	356.0	
205.00	204.59	8.53	-3.77	9.3	336.1	4.3	0.9	
215.00	214.57	9.18	-3.66	9.9	338.2	3.1	13.1	
225.00	224.55	9.60	-3.47	10.2	340.1	2.3	39.9	
235.00	234.55	9.85	-3.17	10.3	342.2	2.3	56.3	
245.00	244.54	9.99	-2.87	10.4	344.0	1.5	73.9	
255.00	254.54	10.08	-2.67	10.4	345.2	1.6	79.6	
265.00	264.53	9.99	-2.29	10.2	347.1	3.4	116.7	
275.00	274.50	9.60	-1.59	9.7	350.6	5.8	122.7	
285.00	284.43	8.88	-0.68	8.9	355.6	7.5	131.3	
295.00	294.31	7.94	0.49	8.0	3.5	10.0	123.2	
305.00	304.16	7.02	1.95	7.3	15.5	9.7	123.0	
315.00	314.01	6.16	3.48	7.1	29.4	10.4	119.7	
325.00	323.84	5.28	5.07	7.3	43.8	10.7	115.8	
329.42	328.18	4.87	5.78	7.6	49.9	10.8	121.6	

GAMMA

NEUTRON

NEUTRON

01:44:30

10:47:15 10:47:15

Jul20,07

Sep03,06

Sep03,06

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250.000

500.000

1.000

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52.00

1.00

[CPS]

500.00

[API-GR]

[API-N]

[API-N]

* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * *

CLIENT	: ELK VALLEY COAL	HOLE ID. : 2998
FIELD OFFICE	: PENHOLD	DATE OF LOG : 09/16/07
DATA FROM	: N/A	PROBE : 9057A , 4430
MAG. DECL.	: 17.000	DEPTH UNITS : METERS
LOG: 2998 09-	-16-07_12-39_9057A02_	7.87_505.76_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	angb
10.00	9.99	-0.01	0.00	0.0	159.7	1.0	154.1
20.00	19.99	-0.15	0.05	0.2	163.0	0.7	174.5
30.00	29.99	-0.28	0.06	0.3	167.9	0.7	173.4
40.00	39.99	-0.40	0.10	0.4	166.5	0.8	158.8
50.00	49.99	-0.53	0.18	0.6	161.3	1.0	136.0
60.00	59.98	-0.66	0.35	0.7	151.9	1.7	116.7
70.00	69.98	-0.78	0.59	1.0	143.0	1.7	117.9
80.00	79.97	-0.93	0.88	1.3	136.6	2.1	119.5
90.00	89.96	-1.15	1.28	1.7	131.8	2.9	123.3
100.00	99.95	-1.39	1.77	2.3	128.2	3.6	119.7
110.00	109.93	-1.66	2.36	2.9	125.1	4.0	113.1
120.00	119.90	-1.97	2.97	3.6	123.6	4.4	122.7
130.00	129.88	-2.30	3.56	4.2	122.9	3.7	126.3
140.00	139.86	-2.69	4.12	4.9	123.1	4.1	125.2
150.00	149.83	-3.11	4.74	5.7	123.3	3.9	125.3
160.00	159.80	-3.56	5.42	6.5	123.3	4.9	122.3
170.00	169.76	-4.05	6.18	7.4	123.3	5.3	123.2
180.00	179.71	-4.58	6.97	8.3	123.3	5.9	125.1
190.00	189.66	-5.12	7.82	9.3	123.2	5.8	117.7
200.00	199.61	-5.59	8.73	10.4	122.6	6.0	115.7
210 00	209.56	-6.06	9.62	11.4	122.2	5.7	119.9
220.00	219.50	-6.56	10.52	12.4	121.9	6.2	117.6
230 00	229.44	-7.08	11.52	13.5	121.6	6.8	116.8
240.00	239.35	-7.58	12.68	14.8	120.9	7.6	116.5
250.00	249.25	-8.14	13.96	16.2	120.3	8.4	113.0
250.00	259.15	-8.70	15.29	17.6	119.6	8.4	111.5
200.00	269 03	-9.24	16.71	19.1	118.9	9.0	111.8
290.00	278 89	-9.77	18.26	20.7	118.1	9.9	105.7
200.00	288.74	-10.18	19.96	22.4	117.0	10.0	101.8
290.00	200.74	-10.46	21.72	24.1	115.7	10.5	98.7
310.00	308.41	-10.71	23.52	25.8	114.5	10.6	97.6
320.00	318.24	-10.93	25.38	27.6	113.3	10.9	97.0
320.00	328.06	-11.14	27.24	29.4	112.2	10.8	96.5
340.00	337 89	-11.36	29.05	31.2	111.4	10.1	97.6
350.00	347 74	-11.62	30.78	32.9	110.7	10.2	98.5
360.00	357.56	-11.95	32.46	34.6	110.2	9.7	100.6
370 00	367.42	-12.28	34.06	36.2	109.8	9.5	103.9
390.00	377.30	-12.60	35.59	37.8	109.5	8.9	103.5
380.00	387 17	-12.94	37.13	39.3	109.2	9.6	102.8
400.00	297 02	-13.18	38.80	41.0	108.8	9.8	96.7
410.00	406 90	-13 48	40.44	42.6	108.4	9.7	101.9
420.00	416 75	-13.80	42.07	44.3	108.2	9.3	101.7
420.00	426.75	-14.10	43.66	45.9	107.9	9.6	101.0
440.00	426.0Z	-14 47	45.38	47.6	107.7	10.5	104.4
450.00	446 20	-14 99	47.18	49.5	107.5	10.6	105.8
450.00	450.27 452 14	-15 AR	48.98	51.4	107.5	11.4	108.3
470 00	100.II 120.II	-16 11	50.84	53.3	107.6	11.7	110.8
490.00	<u>4</u> 75 69	-16.98	52.83	55.5	107.7	12.7	114.5
400.00	405 44	-17.69	55.00	57.8	107.8	13.8	111.4
370.00 600 00	405.41	-18.60	57.33	60.3	108.0	15.0	111.0
500.00 Ene eo	500 A7	-10.16	58.67	61.7	108.1	15.3	111.6
202.28	300.47						

Centri		SLIM GAMMA-NEUTRON
WIRELINE SER	(VICES	2999
COMPANY	ELK VALLE	
WELL	:2999	OTHER SERVICES
FIELD	FORDING R	IVER OPERATIONS
COUNTRY	CANADA	
PROVINCE	ALBERTA	
LOCATION	N/A	
SECTION	N/A	
TOWNSHIP	NA	
RANGE	N/A	
LICENCE NO.	N/A	
UNIQUE WELL ID.	N/A	
PERMANENT DATUM	ē	ELEVATION KB N/A
LOG MEASURED FROM	N.GL	ELEVATION DF N/A
DRL MEASURED FROM	I GL	ELEVATION GL N/A
DATE	09/09/07	
DEPTH DRILLER	413	
BIT SIZE	:13.00	
LOG TOP	:-0.89	
LOG BOTTOM	412.29	
CASING LOGGER	N/A	
CASING DRILLER	69	
CASING TYPE	N/A	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	N/A	
MUD RES	N/A	
MUD WEIGHT	:1.0	
WITNESSED BY	NIA	
RECORDED BY	.B. Beringe	ER .
REMARKS 1	DRILLING	CONTINUED AFTER LOGGING THROUGH RODS
REMARKS 2		
ALL SER	VICES PROV	IDED SUBJECT TO STANDARD TERMS AND CONDITIONS

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1:200 SLIM GAMMA NEUTRON 2999 09/09/07

LOG PARAMETERS

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17 PRESENTATION NAME/DATE = 9067A.0 08/14/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BIT SIZE : 13.00 VERSION = 3.64EK

· |

	TOOL CALIBR TOOL 9067A SERIAL NUM	ATION 2999 09/09/ TM VERSION 1 BER 530	07 18:03			· · · · ·	
	DATE	TIME	SENSOR	ST	ANDARD	RE	SPONSE
1	Jul20,07	01:44:30	GAMMA	1.000	[API-GR]	1.00	[CPS]
	Jul20,07	01:44:30	GAMMA	250.000	[API-GR]	52.00	[CPS]
2	Sep03,06	10:47:15	NEUTRON	1.000	API-N 1	1.00	icpsi
	Sep03,06	10:47:15	NEUTRON	500.000	[API-N]	500.00	[CPS]

CLIENT	: ELK VA	LLEY COAL	HOLE ID	. : 299	9		
FIELD OFF:	ICE : PENHOL	D	DATE OF	LOG : 09/	13/07		
DATA FROM	: N/A		PROBE	: 905	5 a ,	237	
MAG. DECL	. : 17.0	00	DEPTH U	NITS : MET	ERS		
LOG: 2999	09-13-07 16	-02_9055A0	2_13.39_314	.92 DEVI.1	og		
•							
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	angb
15.00	14.99	-0.00	0.00	0.0	117.5	1.0	126.9
25.00	24.99	-0.12	0.18	0.2	123.7	1.3	120.5
35.00	34.98	-0.25	0.41	0.5	121.4	1.5	122.3
45.00	44.98	-0.37	0.64	0.7	120.1	1.7	121.5
55.00	54.98	-0.54	0.89	1.0	121.1	1.9	121.7
65.00	64.97	-0.71	1.14	1.3	122.0	1.8	125.4
75.00	74.96	-0.90	1.45	1.7	122.0	2.2	130.8
85.00	84.96	-1.09	1.83	2.1	120.7	2.9	114.7
95.00	94.94	-1.28	2.34	2.7	118.7	3.2	118.1
105.00	104.92	-1.52	2.88	3.3	117.7	3.4	112.0
115.00	114.91	-1.75	3.42	3.8	117.1	3.1	111.6
125.00	124.89	-1.98	3.97	4.4	116.5	3.6	111.5
135.00	134.86	-2.26	4.63	5.2	116.0	4.4	112.8
145.00	144.83	-2.58	5.36	5.9	115.7	4.8	115.7
155.00	154.79	-2.94	6.18	6.8	115.5	5.8	114.4
165.00	164.74	-3.33	7.07	7.8	115.2	5.6	117.4
175.00	174.69	-3.71	7.99	8.8	114.9	6.0	109.0
185.00	184.63	-4.10	8.98	9.9	114.5	7.1	110.0
195.00	194.56	-4.56	10.07	11.1	114.3	6.9	106.0
205.00	204.48	-5.01	11.25	12.3	114.0	7.5	112.7
215.00	214.39	-5.48	12.50	13.7	113.7	7.7	108.4
225.00	224.29	-5.87	13.83	15.0	113.0	8.4	95.2
235.00	234.19	-6.26	15.20	16.4	112.4	8.1	115.4
245.00	244.08	-6.64	16.63	17.9	111.8	9.4	106.9
255.00	253.94	-7.05	18.25	19.6	111.1	9.9	102.1
265.00	263.79	-7.48	19.88	21.2	110.6	9.7	103.7
275.00	273.65	-7.90	21.52	22.9	110.2	9.7	106.5
285.00	283.50	-8.36	23.19	24.6	109.8	10.1	97.6
295.00	293.32	-8.90	24.94	26.5	109.6	10.4	104.3
305 00	303 12	-9.46	26.84	28.5	109.4	11.5	95.4
314.92	312.77	-10.25	28,81	30.6	109.6	12.8	111.0

* * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

MARKS 2 ALL SERV	REMARKS	RECORDED BY	WITNESSED BY	MUTO RES	RM.TEMPERATURE 1	BOREHOLE FLUID	SING TYPE	ASING BOTTOM 2	SING OD	LOG BOTTOM	Log TOP :1	BIT SIZE :1	DEPTH ORILLER T	DATE 0	DRL MEASURED FROM G	LOG MEASURED FROM G	PERMANENT DATUM G	UNIQUE WELL ID. N	APINO. N	RANGE N	TOWNSHIP N	SECTION N	LOCATION	STATE .9	COUNTY C		MELL 30	COMPANY		WIRELINE SERVI		Contra		
ICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS	HOLE BRIDGED AT 411	BLAYLOCK	SOS DRILLING			WATER .	STEEL	3		178.57	1.92	00.61	92	99/01/07	3L ELEVATION GL N/A											ORDING RIVER OPERATION		LK VALLEY COAL CORPORATION		3000		II GAMMA-CALIPER-RES	COMPENSATED DENSITY	
					1:2	200) (20	M	PE	EN	S,	AT	TE	D	D	E١	15	IT	Y	-	30	000	• _ •	9	9/	01	/07	7					
													ı	00			DΔ	ME																
V		M/ M/ PR	ATRI) AGNE RESE		NSI DEC TIOI	TY : CL : N N/	2.6 1' AME	35 7.00 Ξ/D/	TE	=	913	39-(L NE EL PRI		RON T. CI		RA ATF OFF 07	ME :: :/07.	S/ 999 /200	ND 999 07	STC	DNE				M BI VI	ATF	IX [ZE SION)ELT; = 3	A T : 64EI	177 13.0 D	, 0		Y
V		MA MA PE	ATRI) AGNE RESE CALIE			TY : CL : N N/	2.6 1 [°] AME	35 7.00 E/D/		= ME	913 TER	39-f			B P RON T. C RES			ME ::::::::::::::::::::::::::::::::::::	S/ 994 /200	299 07	S STC			RE	\$(S	M BI VI G)	ATR	IX [ZE SION)= 3	A T : 64EI	177 13.0 D	, 0 		
-3		MA PR	ATRI) AGNE RESE CALII C			TY : 2L : N N/	2.6 1 [°] AME	35 7.00 E/D/	17	= ME	913 TER	39-f			P RON T. C RES			ME 21X : 2 2/007/	S/ 999 200	2007	5 5TC				\$(S M-	M BI VI G) A DL)	ATF		DELT,	A T : 64EI	177 13.0 D	, 0 		3000
-3 0		MA PF	ATRI) AGNE RESE CALII C GAM	CDE ETIC INTA PERI M MMA		TY : CL : N N/	2.6 1 [°] AME	35 7.00 E/DA	17 40	= ME	913 TER	39-f			B P RON F. C RES			ME (IX : //07/	: I E S/ 999 /200	2999 07	STC				3(S M- I(Cl	M BI VI G) A	ATR IT S ERS		DELT,	A T : : 64EI	177 13.0 D	, 0 		3000
-3 0			ATRI) AGNE RESE CALII C GAM API	C DE ETIC INTA PERI M M AMA			2.6	35 7.00 =/DA	ATE	= ME		39-f								283 AND 2999 27	STC						ATF		DELT,	A T : 64E	177 13.0 D	, 0 		3000

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9139-PRINT-RES.0 07/07/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

MATRIX DELTA T : 177 BITSZE : 13.00 VEDION - AATT

- -		
0 +	SLIM GAMMA-NEUT	RON
WIRELINE SERV	3000	
COMPANY	ELK VALLEY COAL CORPORATION	
WELL	3000	9057
FIELD	FORDING RIVER OPERATIONS	9139
COUNTY	CANADA	
STATE	BC .	
LOCATION	N/A	
SECTION	N/A	
TOWNSHIP	N/A	
RANGE	N/A	
API NO.	N/A	
UNIQUE WELL ID.	N/A	
PERMANENT DATUM	GL ELEVATION KB N/A	
LOG MEASURED FROM	IGL ELEVATION DF N/A	
DRL MEASURED FROM	GL ELEVATION GL N/A	
DATE	08/31/07	
DEPTH DRILLER	:192	
BIT SIZE	13	
LOG TOP	0.28	
LOG BOTTOM	189.81	
CASING OD	N/A	
CASING BOTTOM	نى ا	
CASING TYPE	STEEL	
BOREHOLE FLUID	WATER	
RM TEMPERATURE	N/A	
MUD RES	NA	
MUD WEIGHT	4.0	
WITNESSED BY	SDS DRILLING	
RECORDED BY	BLAYLOCK	
REMARKS 1	HOLE BRIDGED AT 411	
REMARKS 2		
ALL SER	VICES PROVIDED SUBJECT TO STANDARD TERMS AND CON	DIFIONS

1:200 SLIM GAMMA NEUTRON 3000 08/31/07

LOG PARAMETERS

NEUTRON MATRIX : SANDSTONE MATRIX DENSITY : 2.65 BIT SIZE : 13 MAGNETIC DECL: 17.00 ELECT. CUTOFF : 99999 VERSION = 3.64ED PRESENTATION NAME/DATE = 9067A_530.0 08/25/2007

MATRIX DELTA T : 177

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1:200 SLIM	GAMMA NEUTRON 3000	0 08/31/07
	LOG PARAMETERS	
MATRIX DENSITY : 2.65	NEUTRON MATRIX SANDSTONE	MATRIX DELTA T : 177
MAGNETIC DECL : 17.00 PRESENTATION NAME/DATE #	ELECT. CUTOFF 99999	BIT SIZE : 13 VERSION = 3.64ED

	TOOL 9067A SERIAL NUME	TM VERSION 1 BER 530					
	DATE	TIME	SENSOR	STA	NDARD	RES	SPONSE
1	Jul20,07	01:44:30	GAMMA	1 000	[API-GR]	1.00	[CPS]
	Jul20,07	01 44:30	GAMMA	250.000	API-GR	52.00	[CPS]
2	Sep03.06	10:47:15	NEUTRON	1 000	[API-N]	1.00	[CPS]
	Sep03,06	10:47:15	NEUTRON	500 000	[API-N]	500.00	[CPS]
	06900,00	10.47.10			from the second s		

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PLAN VIEW COMPU-LOG DEVIATION

CLIENT: ELK VALLEY COAL CORPORATION LOCATION: FORDING RIVER OPERATIONS HOLE ID: 3000 DATE OF LOG: 09/01/07 PROBE: 9057A 1067

MAG DECL: 17.0

SCALE: 2 M/CM TRUE DEPTH: 176.02 M AZIMUTH: 96.9 DISTANCE: 15.8 M + = 10 M INCR \odot = BOTTOM OF HOLE

HOLE ID. : 3000 DATE OF LOG : 09/01/07 PROBE : 9057A , 1067 DEPTH UNITS : METERS 94_177.15_DEVI.log

	TRITE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	ANGB
	5 00	-0.01	0.03	0.0	101.8	1.3	92.4
15.00	15 00	-0.02	0.23	0.2	94.9	0.8	102.2
15.00	25.00	-0.05	0.37	0.4	97.0	0.7	83.0
25.00	23.00	-0.07	0.54	0.5	97.2	1.3	96.5
45 00	44 QQ	-0.13	0.83	0.8	99.0	1.8	107.8
55 00	54 98	-0.18	1.27	1.3	98.2	3.1	96.9
S5.00	64.96	-0.27	1.92	1.9	98.1	4.2	96.3
75 00	74.93	-0.31	2.65	2.7	96.6	4.9	88.8
25 00	84 90	-0.30	3.47	3.5	95.0	4.8	91.2
95.00	94.85	-0.29	4.38	4.4	93.8	6.6	88.3
105 00	104 78	-0.28	5.56	5.6	92.9	7.4	89.7
115 00	114 70	-0.31	6.86	6.9	92.6	7.8	92.0
125 00	124 61	-0.37	8.21	8.2	92.6	7.8	92.5
125.00	134 52	-0.48	9.54	9.6	92.9	7.8	100.5
145 00	144 43	-0.71	10.86	10.9	93.7	8.0	102.6
155.00	154 32	-1 05	12.28	12.3	94.9	8.7	103.9
165 00	164 20	-1.42	13.77	13.8	95.9	9.2	105.3
175.00	174 07		15.34	15.4	96.7	9.5	105.2
176 00	176 02	-1.89	15.65	15.8	96.9	9.5	104.1

			TI STANKS BURN		UNARTAL IN TRANSPORT			DHEIGHT 1.D		A LEAKEN MAKE NA	XBHOLE FUILD XH100	SNOTIPE STEEL	MHO DRULER 3	SHALLOGGEN HH	O DOTTICAL SISSIA	110 9 1100	ALMONTON 282	ie balbo		O NEVENIED FROM &	ERMANDER DATUM SA	NOVE WELLID. XXX	BRCENO, JOA	斜 芰			NAICE AUGUTA	NUMB THE	10 SONDINGR	T 300		-					
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CLIENT FIELD OFF DATA FROM MAG. DECL LOG: 2039	: ELK VA ICE : PENHOL : N/A . : 17.0 09-12-07 12	LLEY COAL D 00 -55 90573 0	Hole ID Date of Probe Depth U 2 6 80 583	. : 303 LOG : 09/ : 905 NITS : MET	9 12/07 7A , ERS	4430	
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	ALIMUTH	SANG	s
10.00	10.00	-0.02	-0.01	0.0	213.5	0.9	
20.00	20.00	-0.16	-0.12	0.2	217.7	1.3	
30.00	30.00	-0.28	-0.28	0.4	224.6	1.4	
			~ ~ ~				

ABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG SJ	NGB
10.00	10.00	-0.02	-0.01	0.0	213.5	0.9	217.2
20.00	20.00	-0.16	-0.12	0.2	217.7	1.3	229.0
30.00	30.00	-0.28	-0.28	0.4	224.6	1.4	228.2
40.00	39.99	-0.39	-0.49	0.6	231.6	1.5	248.1
50.00	49.99	-0.46	-0.82	0.9	240.6	2.0	266.1
60.00	59.98	-0.50	-1.19	1.3	247.0	1.7	267.5
70.00	69.98	-0.52	-1.44	1.5	250.1	1.3	271.5
80.00	79.97	-0.52	-1.68	1.8	252.9	1.6	271.5
90.00	89.97	-0.52	-1.96	2.0	255.1	1.6	269.1
100.00	99.96	-0.51	-2.29	2.3	257.4	1.9	275.5
110.00	109.96	-0.47	-2.73	2.8	260.1	2.7	279.7
120.00	119.94	-0.37	-3.19	3.2	263.3	3.0	283.6
130 00	129.93	-0.23	-3.69	3.7	266.4	3.1	290.0
140.00	139.92	-0.04	-4.19	4.2	269.5	3.0	291.3
150 00	149.90	0.18	-4.65	4.7	272.2	3.0	299.7
160 00	159 89	0.47	-5.15	5.2	275.2	3.5	302.5
170 00	169 87	0 83	-5.67	5.7	278.3	3.8	306.4
180 00	179 94	1.23	-6.19	6.3	281.2	3.9	306.8
190 00	189.82	1.66	-6.70	6.9	283.9	4.0	312.4
200 00	199 80	2.14	-7.22	7.5	286.5	4.0	313.4
210 00	209 77	2 65	-7.71	8.2	289.0	4.3	316.3
220 00	219 74	3.21	-8.21	8.8	291.4	4.3	322.4
220.00	220 72	3 78	-8.67	9.5	293.5	4.2	324.6
240.00	230 69	4 45	-9 10	10 1	296.0	4.7	329.2
250 00	249 65	5 16	-9.50	10.8	298.5	4.7	333.8
260.00	259 62	5 20	-9.87	11 5	300.8	4.7	328.5
270 00	269 59	6 59	-10.26	12.2	302.7	4.4	330.7
290.00	279 56	7 26	-10 62	12 9	304.4	4.5	332.6
200.00	200 52	8 00	-11 03	13.6	306.0	5.1	330.1
200.00	209.48	8 78	-11 48	14 5	307.4	5.5	333.0
310 00	309 44	9.55	-12.00	15.3	308.5	5.6	322.0
320 00	319 39	10 37	-12.71	16.4	309.2	6.5	317.9
330 00	329 31	11.18	-13.54	17.6	309.5	7.1	311.9
340 00	339 22	12 00	-14.55	18.9	309.5	7.8	308.8
350 00	349 13	12.87	-15.64	20.3	309.4	8.2	308.1
360.00	359 02	13 74	-16.81	21.7	309.3	8.3	306.9
370 00	368 90	14.63	-18.08	23.3	309.0	9.3	306.7
380 00	379 76	15.56	-19.47	24.9	308.6	9.9	302.7
390 00	388 61	16.44	-20.95	26.6	308.1	10.1	297.4
400.00	200 46	17 21	-22 51	28.3	307.4	9.9	295.7
410.00	400 31	17 99	-24 05	30.0	306 6	9.5	295.9
420.00	419 16	19 69	-25 57	31 7	306.2	10 7	301.4
420.00	407 67	10.03	-27 21	33 6	306.0	12 3	307 1
440 00	36/17/ 407 70	17.77 21 12	-20 05	75 Q	306 1	13 3	311 8
450.00	131.12 AA7 A3	24.13	-20.90	29.2	306 7	14 2	321 8
40.00	111/.13 457 00	22.03 34 85	-30.05	40.2	307 0	16 9	330 9
470 00	1101.UC A## ##	47.77 07 60	-32.12 _33 AF		300 4	17 2	334 4
400 00	100.00	20.30	-34 40	46 0	311 1	19.2	238 5
400.00	4/0.13	30.20	-34.07	49.0	313 0	19.2	343 0
490.00	100.01 405 A0	33.31 36 69	-35.13	-19.7 E1 0	314 0	10.2	342 3
500.00 E10 00	433.V3 604 40	20.32	-27 62	54.0 64 9	316 6	19 8	344 5
310,00		33.11	31.03	J O			******

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1:200 SLIM GAMMA NEUTRON 3040 09/15/07

LOG PARAMETERS

MATRIX DENSITY : 2.65NEUTRON MATMAGNETIC DECL : 17ELECT. CUTOFPRESENTATION NAME/DATE =9067A.009/11/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 A.0 09/11/2007

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK



ONDITIONS	PROVIDED SUBJECT TO STANDARD TERMS AND CC	WICES F	ALL SEF
			REMARKS 2
			REMARKS 1
	RINGER	:B. BER	RECORDED BY
	DRILLING	:SDS D	WITNESSED BY
		1.0	MUD WEIGHT
		N/A	MUD RES
		NIA	RM TEMPERATURE
	R	WATE	BOREHOLE FLUID
	F	STEEL	CASING TYPE
		ω	CASING DRILLER
		A/N	CASING LOGGER
	3	:400.63	LOG BOTTOM
		0.43	LOG TOP
		:13	BIT SIZE
		401	DEPTH ORILLER
	<i>1</i> 07	09/15/	DATE
	ELEVATION GL N/A	N :GL	DRL MEASURED FROM
	ELEVATION DF N/A	Migh	LOG MEASURED FRO
	ELEVATION KB N/A	ĢL	PERMANENT DATUM
		NIA	UNIQUE WELL ID.
		N/A	LICENCE NO.
		N/A	RANGE
		N/A	TOWNSHIP
		N/A	SECTION
		N/A	LOCATION
	RTA	ALBER	PROVINCE
	1DA	CANA	COUNTRY
0770	DING RIVER OPERATIONS	FORD	FIELD
9057		:3040	WELL
	ALLEY COAL	ELK V	COMPANY
	S 3040		WIRELINE SEI
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1:200 SLIM GAMMA NEUTRON 3040 09/15/07

LOG PARAMETERS

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MATRIX DENSITY : 2.65

NEUTRON MATRIX : SANDSTONE MAGNETIC DECL: 17 ELECT. CUTOFF : 999999 PRESENTATION NAME/DATE = 9067A.0 09/11/2007

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

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1:200 COMPENSATED DENSITY 3042 09/27/07

LOG PARAMETERS

MATRIX DENSITY : 2.65 MAGNETIC DECL: 17.00

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999 PRESENTATION NAME/DATE = 9239-PRINT-RES.0 09/23/2007

MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.64EK





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* * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

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CLIENT FIELD OFF DATA FROM MAG. DECL LOG: 3042	: ELK VA ICE : PENHOL : N/A . : 17.0 _09-27-07_18	LLEY COAL CO D 00 -09_9057A0	R HOLE ID DATE OF PROBE DEPTH U 20.12_538	. : 304 LOG : 09/ : 905 NITS : MET .26_DEVI.1	2 27/07 7a, , Ers og	4430	
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	į
5.00	5.00	0.02	0.04	0.0	64.6	0.4	ł
15.00	15.00	0.10	0.27	0.3	70.1	2.0	3
25.00	24.99	0.20	0.70	0.7	73.6	3.0	3

ABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
5.00	5.00	0.02	0.04	0.0	64.6	0.4	65.9
15.00	15.00	0.10	0.27	0.3	70.1	2.0	69.9
25.00	24.99	0.20	0.70	0.7	73.6	3.0	68.3
35.00	34.96	0.34	1.36	1.4	75.9	4.5	77.2
45.00	44.92	0.56	2.25	2.3	76.1	6.2	75.7
55.00	54.86	0.93	3.30	3.4	74.3	6.5	52.9
65.00	64.81	1.24	4.25	4.4	73.7	5.6	70.2
75.00	74.76	1.58	5.17	5.4	73.0	5.6	69.9
85.00	84.71	1.97	6.04	6.4	72.0	5.5	63.9
95.00	94.67	2.44	6.83	7.3	70.3	5.3	55.3
105.00	104.63	2.98	7.57	8.1	68.5	4.9	52.7
115.00	114.59	3.50	8.22	8.9	66.9	4.7	48.9
125.00	124.57	3.93	8.79	9.6	65.9	3.7	54.2
135.00	134.55	4.34	9.29	10.3	64.9	3.8	43.8
145.00	144.53	4.81	9.68	10.8	63.6	4.1	. 31.1
155.00	154.51	5,39	10.00	11.4	61.7	3.6	24.7
165.00	164.49	5.95	10.23	11.8	59.8	3.2	16.0
175.00	174.47	6.48	10.35	12.2	57.9	3.3	7.4
185.00	184.45	7.11	10.31	12.5	55.4	3.7	352.0
195.00	194.43	7.70	10.17	12.8	52.9	3.3	341.8
205.00	204.42	8.22	9.97	12.9	50.5	3.3	. 338.7
215.00	214.40	8.76	9.75	13.1	48.1	3.4	336.4
225.00	224.38	9.33	9.49	13.3	45.5	3.8	334.1
235.00	234.36	9.89	9.22	13.5	43.0	3.6	336.0
245.00	244.34	10.45	8.97	13.9	40.6	3.7	335.1
255.00	254.32	11.05	8.69	14.1	38.2	3.7	335.9
265.00	264.30	11.64	8.41	14.4	35.8	4.2	333.1
275.00	274.27	12.31	8.06	14.7	33.2	4.4	331.9
285.00	284.24	12.99	7.65	15.1	30.5	4.6	322.3
295.00	294.21	13.61	7.16	15.4	27.8	4.3	321.4
305.00	304.17	14.24	6.61	15.7	24.9	5.4	320.7
315.00	314.13	14.98	6.04	16.1	22.0	5.7	328.2
325.00	324.07	15.90	5.55	1.6.8	19.2	6.1	. 334.2
335.00	334.01	16.96	5.16	17.7	16.9	6.5	352.6
345.00	343.94	18.07	4.77	18.7	14.8	6.7	342.5
355.00	353.87	19.19	4.45	19.7	13.1	6.4	344.8
365.00	363.81	20.29	4.20	20.7	11.7	6.4	350.3
375.00	373.74	21.48	4.00	21.8	10.6	7.4	351.7
385.00	383.65	22.77	3.80	23.1	9.5	7.6	5 349.5
395.00	393.56	24.13	3.65	24.4	8.6	7.5	5.2
405.00	403.46	25.49	3.63	25.7	8.1	7.7	0.5
415.00	413.37	26.82	3.68	27.1	7.8	7.0	5 0.9
425.00	423.28	28.15	3.79	28.4	7.7	7.4	3.8
435.00	433.20	29.43	3.89	29.7	7.5	7.4	2.3
445.00	443.11	30.75	3.92	31.0	7.3	7.1	\$ 359.3
455.00	453.03	32.02	3.90	32.3	6.9	7.	359.2
465.00	462.95	33.32	3.90	33.5	6.7	7.	1.5
475.00	472.85	34.69	3.93	34.9	6.5	8.0	1.0
485.00	482.76	36.05	3.94	36.3	6.2	7.	359.8
495.00	492.68	37.31	3.87	37.5	5.9	7.1	L 356.5
505.00	502.61	38.47	3.74	38.6	5.6	6.	/ 349.2





LOG PARAMETERS

MATRIX DELTA T : 177

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9067A_530.0 09/20/2007

NEUTRON MATRIX : SANDSTONE ELECT. CUTOFF : 99999

BIT SIZE : 13 VERSION = 3.64EK

TOOL 9	067A TM VERSION 1 NUMBER 530	20.40				
DATE	TIME	SENSOR	STA	ANDARD	RE	SPONSE
Jul20,	07 01:44:30	GAMMA	1.000	(API-GR)	1.00	[CPS]
Jul20.	07 01:44:30	GAMMA	250.000	API-GR	52.00	[CPS]
Sep03	.06 10:47:15	NEUTRON	1 000	API-N	1.00	[CPS]
Sep03	.06 10:47:15	NEUTRON	500.000	API-N	500.00	[CPS]



CLIENT: ELK VALLEY COAL CORPORATION SCALE: 5 M/CM LOCATION: FORDING RIVER OPERATIONS TRUE DEPTH: 316.28 M HOLE ID: 3043 AZIMUTH: 291.9 DATE OF LOG: 09/22/07 DISTANCE: 17.2 M PROBE: 9057A 4430 + = 50 M INCRMAG DECL: 17.0 \circ = bottom of hole **N**40.0M _30.0M 20.0M 10.0M W E S

* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ELK VALLEY	COAL COR	HOLE ID.	: 3043
FIELD OFFICE	: PENHOLD		DATE OF LOG	: 09/22/07
DATA FROM	: N/A		PROBE	: 9057 A , 443 0
MAG. DECL.	: 17.000		DEPTH UNITS	: Meters
LOG: 3043_09-	-22-07_21-35_	9057A02_8	.84_317.64_DE	VI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZ IMUTH	SANG SI	NGB
10.56	10.56	0.00	0.00	0.0	2.7	1.4	2.7
20.00	20.00	0.20	0.00	0.2	1.3	1.3	348.5

30.00	30.00	0.37	0.02	0.4	3.3	0.8	22.4
40.00	40.00	0.48	0.13	0.5	15.3	0.9	69.3
50.00	49.99	0.46	0.34	0.6	36.0	1.7	103.1
60.00	59.90	0.26	0.60	0.7	67.0	1.6	105.6
70.00	69.89	0.18	0.87	0.9	78.5	1.5	104.6
80.00	79.89	0.14	1.19	1.2	83.5	2.0	85.0
90.00	89.88	0.14	1.52	1.5	84.6	1.7	89.5
100.00	99.88	0.17	1.81	1.8	84.7	1.4	83.6
110.00	109.87	0.20	1.96	2.0	84.3	0.2	61.3
120.00	119.87	0.22	1.99	2.0	83.8	0.3	66.5
130.00	129.87	0.33	1.92	1.9	80.2	1.9	299.6
140.00	139.86	0.50	1.52	1.6	71.8	2.9	292.1
150.00	149.85	0.63	1.01	1.2	58.0	3.2	283.1
160.00	159.82	0.85	0.37	0.9	23.8	4.2	291.6
170.00	169.80	1.11	-0.32	1.2	344.1	3.9	301.2
180.00	179.76	1.42	-1.04	1.8	323.7	4.6	292.1
190.00	189.73	1.66	-1.79	2.4	312.8	4.5	284.5
200.00	199.71	1.84	-2.53	3.1	306.1	4.3	281.7
210.00	209.67	2.00	-3.30	3.9	301.3	5.2	279.7
220.00	219.63	2.23	-4.19	4.7	298.0	5.8	287.5
230.00	229.58	2.47	-5.19	5.7	295.5	6.6	282.3
240.00	239.51	2.72	-6.29	6.9	293.4	6.7	283.4
250.00	249.44	3.03	-7.47	8.1	292.1	7.0	286.9
260.00	259.35	3.42	-8.70	9.3	291.5	7.3	287.2
270.00	269.27	3.84	-9.93	10.6	291.2	7.5	292.7
280.00	279.18	4.33	-11.13	11.9	291.3	7.7	293.6
290.00	289.09	4.88	-12.37	13.3	291.5	8.0	294.8
300.00	298.99	5.43	-13.65	14.7	291.7	8.2	293.0
310.00	308.89	5.98	-14.98	16.1	291.8	8.2	293.0
317.46	316.28	6.40	-15.95	17.2	291.9	8.1	291.2







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Desc. : 17.000 DEFRY UNITS : METRIE LOG: 304410-21-07_15-46_9057A.02_30.00_598.99_DRVT.log CARLE DEFTH TRUE DEFTH NORTY DKV. EAST DEV. DISTANCE ALLOTT SANG SANGE 40.00 40.00 0.03 0.29 0.3 84.5 2.1 89.2 50.00 49.99 0.10 0.64 0.6 81.1 2.3 77.5 60.00 59.99 0.21 1.06 1.7 77.0 4.2 72.7 70.00 69.96 0.37 1.62 1.7 77.0 4.2 72.7 80.00 79.93 0.65 2.31 2.4 74.2 3.9 66.5 73.3 120.00 19.86 1.40 4.47 4.7 72.6 5.2 74.8 120.00 129.74 1.83 6.53 6.8 74.3 6.9 75.7 130.00 129.74 1.83 6.53 77.7 8.8 77.9 8.8 77.9	client Field offi Data from	: ELK VAL ICE : PENHOLD N/A	LEY COAL COR	HOLE ID. DATE OF L PROBE	: 3044 00 : 10/21 : 90572	/07	4430	
Log: $30.44_{10}-21-07_{15}-46_{9}057A02_{3}0.00_{598.99}_{DEVT.log}$ CARLE DEPTH TURE DEPTH NORTH DEV. ELST DEV. DISTANCE AZIMUTH SANG SANGE 30.02 30.02 0.00 0.00 0.0 94.3 1.3 $94.340.00$ 40.00 0.03 0.29 0.3 94.5 1.2 $83.2650.00$ 49.99 0.10 0.64 0.6 1.1 78.5 2.9 $73.370.00$ 69.98 0.21 1.06 1.1 78.5 2.9 $73.370.00$ 69.98 0.21 1.06 1.1 78.5 2.9 $73.370.00$ 69.98 0.21 1.02 1.7 7.1 4.2 $9.72.690.00$ 85.913 0.00 2.95 3.1 7.26 $4.72.690.00$ 85.913 0.00 2.95 3.1 7.26 $4.72.690.00$ 89.813 0.10 2.95 3.1 7.26 $4.72.72.691.00$ 119.85 1.45 5.44 7.7 3.9 72.6 $4.72.7130.00$ 129.74 1.63 5.54 7.3 3 5.9 $77.2140.00$ 129.74 1.63 6.53 6.8 74.3 6.9 $79.7140.00$ 139.66 2.21 9.16 9.4 76.4 7.7 $12.9150.00$ 159.36 2.61 11.955 10.8 77.2 8.1 $82.2170.00$ 169.36 2.61 11.955 10.8 77.2 8.1 $82.2170.00$ 169.36 2.61 11.955 10.8 77.7 8.3 $80.1130.00$ 179.25 2.66 13.36 13.7 77.7 8.8 $76.42200.00$ 199.02 3.59 16.34 15.2 77.9 8.8 $76.42200.00$ 220.69 4.06 17.85 13.3 77.1 9.5 $70.52230.00$ 226.58 5.37 21.11 21.8 75.7 10.6 $67.2240.00$ 236.40 6.13 22.85 33.0 72.5 $12.2.4$ $65.0270.00$ 267.70 $8.77.2$ $8.12.4350.00$ 277.42 10.6 $67.2230.00$ 27.24 10.96 22.65 33.0 72.5 $12.2.4$ $65.3320.00$ 27.44 10.1 6.6 $12.22.85$ 33.5 77.5 $12.2.4$ $65.3330.00$ 277.42 12.96 $63.23.7$ 77.6 9.0 $11.2.2$ $65.3330.00$ 277.42 12.96 $63.23.7$ 77.6 $9.12.7$ $62.1330.00$ 237.24 10.96 426.67 $30.67.7$ 67.3 17.5 $63.7330.00$ 374.30 22.57 55.05 55.7 76.7 1.1 22.6 $63.3350.00$ 374.30 22.57 15.25 15.37 67.6 17.1 12.57 $63.5350.00$ 355.14 18.70 45.9 47.6 48.77 47.8 47.6 48.7 47.7 48.7 48.7 47.7 48.7 48.7	MAG. DECL.	: 17.00	0	DEPTH UNI	TS : METER	is í		
CARLE DEPTH TRUE DEPTH NORTH DEV. EAST DEV. DISTANCE AEIGUTH SANGE 30.02 30.02 -0.00 0.00 0.0 94.3 1.3 94.3 50.00 49.99 0.10 0.64 0.6 81.1 2.3 77.5 60.00 59.98 0.21 1.06 1.1 78.5 2.9 73.3 70.00 69.96 0.37 1.62 1.7 77.4 4.2 72.6 80.00 78.93 0.65 2.35 2.4 73.3 6.5.9 77.2 6 5.6 73.1 1100.00 98.88 1.15 3.47 7.7 73.3 6.9 77.2 130.00 139.66 2.21 9.16 9.4 76.4 8.1 82.2 140.00 159.46 2.40 10.55 10.8 77.7 8.3 80.1 130.00 139.02 3.59 77.5 8.8 77.5 8.0 80.1 1	LOG: 3044	10-21-07_15-	46_9057A02_3	30.00_598.9	9_DEVI.log	I		
Check Dispert Trols Dispert North Dis Less Disperts Dispert Trols Dispert North Dis Less Disperts Dispert North Disperts Disperse Dispersion Disperse Dispersion Disperse					TORANCE 2		GANG S	ANGR
a_0 <th< td=""><td>CABLE DEPTR</td><td>30.02</td><td>-0.00</td><td>0.00</td><td>0.0</td><td>94.3</td><td>1.3</td><td>94.3</td></th<>	CABLE DEPTR	30.02	-0.00	0.00	0.0	94.3	1.3	94.3
50.00 49.99 0.10 0.64 0.6 81.1 2.3 77.5 50.00 59.96 0.37 1.62 1.7 77.0 4.2 72.0 80.00 79.93 0.65 2.31 2.4 77.5 66.5 90.00 89.91 0.90 2.95 3.1 73.1 4.0 68.9 100.00 19.85 1.40 4.47 4.7 72.6 4.6 73.1 110.00 119.85 1.60 4.47 4.7 72.6 5.2 74.9 120.00 129.74 1.63 6.53 6.8 74.3 6.9 79.7 140.00 139.66 2.21 9.16 9.4 76.4 8.1 82.2 170.00 149.56 2.21 9.16 9.4 76.4 8.1 82.2 170.00 159.46 2.461 11.95 12.2 77.7 8.3 80.1 180.00 179.28 2.861 13.36 13.7 77.6 9.0 74.1 210.00 208.98 4.08 17.85 18.3 77.1 9.5 70.5 2230.00 228.59 5.37 21.11 21.8 75.0 11.2 66.6 220.00 248.19 6.96 24.68 25.6 74.3 12.4 65.4 220.00 228.59 5.37 21.11 21.8 75.0 11.2 65.6 220.00 237.76 8.67 22.63 $30.$	40.00	40.00	0.03	0.29	0.3	84.5	2.1	83.2
60.00 59.96 0.21 1.06 1.1 78.5 2.9 73.3 70.00 69.96 0.37 1.62 1.7 70.0 4.2 72.0 80.00 79.93 0.65 2.31 2.4 74.2 3.9 68.5 100.00 99.88 1.15 3.67 3.9 72.6 4.6 73.1 110.00 19.85 1.40 4.47 4.7 72.6 5.2 74.9 120.00 119.80 1.63 5.44 5.7 73.3 5.9 77.2 130.00 129.74 1.83 6.53 6.8 75.4 7.7 81.8 150.00 149.56 2.03 7.76 8.0 75.4 77.2 8.1 82.2 160.00 159.46 2.40 10.55 10.8 77.2 8.1 82.2 160.00 179.25 2.66 13.36 13.7 77.9 8.0 80.0 190.00 199.02 3.59 16.34 16.7 77.6 9.0 74.1 220.00 218.74 4.69 19.43 20.0 76.4 10.1 67.5 220.00 228.58 5.37 21.1 21.5 71.5 11.2 65.6 270.00 227.95 7.90 26.67 27.8 73.5 12.9 65.6 270.00 287.95 7.90 26.67 27.8 73.5 12.9 65.6 270.00 287.75 7.90	50.00	49.99	0.10	0.64	0.6	81.1	2.3	77.5
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	60.00	59.98	0.21	1.06	1.1	78.5	2.9	73.3
30,00 $79,33$ $0,90$ $2,95$ $1,2$ $1,3$ $72,6$ $4,6$ $73,1$ $100,00$ $39,88$ $1,15$ $3,67$ $3,9$ $72,6$ $4,6$ $73,1$ $110,00$ $109,80$ $1,40$ $4,47$ $4,7$ $72,6$ $5,2$ $74,8$ $120,00$ $119,80$ $1,63$ $5,44$ $5,7$ $73,3$ $5,9$ $77,2$ $130,00$ $129,40$ 1.83 $6,53$ $6,8$ $74,3$ $6,9$ $79,72$ $140,00$ $139,66$ $2,03$ $7,76$ $8,0$ $75,4$ $7,7$ $81,8$ $150,00$ $149,866$ $2,03$ $7,76$ $8,0$ $75,4$ $7,7$ $8,18$ $140,00$ $159,46$ $2,40$ $10,55$ $10,8$ $77,2$ $8,1$ $82,2$ $170,00$ $169,36$ $2,61$ $13,36$ $13,7$ $77,9$ $8,0$ $80,0$ $130,00$ $179,25$ $2,86$ $13,36$ $13,7$ $77,9$ $8,0$ $80,0$ $120,00$ $199,02$ $3,59$ $16,34$ $16,7$ $77,6$ $9,0$ $74,1$ $220,00$ $218,74$ $4,69$ $19,43$ $20,0$ $76,4$ $10,1$ $67,9$ $220,00$ $228,58$ $5,37$ $21,11$ $21,6$ $77,0$ $8,3$ $80,2$ $220,00$ $238,40$ $6,13$ $22,65$ $23,7$ $75,0$ $11,2$ $65,0$ $220,00$ $237,77$ $9,86$ $30,55$ $32,1$ $72,1$ $12,2$ $65,0$ $220,00$ $277,77$ <t< td=""><td>70.00</td><td>69.96</td><td>0.37</td><td>1.62</td><td>1.7</td><td>77.0</td><td>4.2</td><td>68.5</td></t<>	70.00	69.96	0.37	1.62	1.7	77.0	4.2	68.5
	90.00	79.93 Rg g1	0.85	2.95	3.1	73.1	4.0	68.9
	100.00	99.88	1.15	3.67	3.9	72.6	4.6	73.1
120.00119.801.635.445.773.35.977.2130.00139.662.037.768.075.47.781.9150.00149.562.219.169.476.48.182.2160.00159.462.4010.5510.677.28.182.2170.00169.362.6111.9512.277.78.380.1180.00179.252.8613.3613.777.98.080.0190.00199.143.1814.8315.277.98.876.4200.00208.894.0817.8518.377.19.570.52240.00228.585.3721.1121.877.510.667.2230.00228.585.3721.1121.877.510.667.2240.00248.196.9624.6825.674.312.965.0270.00267.708.8728.6330.072.812.465.4280.0027.4410.8632.4034.271.512.161.3300.00287.2410.8632.4034.271.512.162.0290.00287.2410.8632.4034.271.512.463.8300.00326.1615.1740.5843.369.515.563.9300.00326.1615.1740.5843.369.515.760.1300.00355.1418	110.00	109.85	1.40	4.47	4.7	72.6	5.2	74.9
130.00129.741.836.536.874.36.979.7140.00139.662.019.169.476.48.182.2160.00159.462.4010.5510.877.28.182.2170.00159.362.6111.9512.277.78.380.1180.00179.252.8613.3613.777.98.080.0190.00199.143.1814.8315.277.98.876.4200.00218.744.6919.4320.077.19.570.5220.00228.585.3721.1121.875.710.667.2240.00236.406.1322.8523.775.011.266.0250.00246.196.9226.6727.873.512.965.0270.00257.708.8728.330.072.812.464.3260.00277.479.8630.5532.172.112.562.0290.00297.0211.8634.2636.370.912.762.1300.00297.2211.8634.2636.370.912.762.8330.00326.1615.1740.5943.369.514.763.8340.00335.6216.3242.9045.969.214.763.8350.00345.4917.4745.1648.466.914.762.4360.00355.14	120.00	119.80	1.63	5.44	5.7	73.3	5.9	77.2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	130.00	129.74	1.83	6.53	6.8	74.3	6.9	79.7
160.00169.361.219.131.219.131.219.131.219.149.14180.00179.252.8613.3613.777.98.080.1180.00199.143.1814.8315.277.78.876.4200.00189.143.1814.8315.277.19.570.5210.00208.994.0817.8518.377.19.570.5220.00218.744.6919.4320.076.410.167.9230.00228.585.3721.1121.87.7510.667.2240.00238.406.1322.6523.775.011.266.0250.00246.196.9624.6825.672.78.12.463.3260.0027.778.8728.6330.072.812.463.3290.00277.479.8630.5532.172.112.562.0300.00297.0211.8634.2636.370.912.762.1300.00287.0211.8634.2636.370.413.061.1320.00316.4714.0438.3740.969.914.762.4360.00345.4917.4745.1648.468.914.763.8360.00345.4917.4745.1648.468.914.763.8360.00345.4917.4745.1648.468.914.763.8	140.00	139.66	2.03	7.70	0.U 0.4	76 4	8 1	82.2
170.00160.3e2.6111.9E12.277.78.380.1180.00179.252.8613.3613.777.98.080.0190.00199.143.1814.8316.777.98.876.4200.00199.023.5916.3416.777.98.080.0220.00218.744.6919.4320.076.410.167.9230.00228.585.3721.1121.875.710.667.2240.00238.406.1322.8523.775.011.265.0250.00248.196.9624.6825.674.312.465.4260.00277.479.8630.5532.172.112.562.0270.00267.708.8728.6330.072.812.465.4300.00297.2410.8632.4034.271.512.161.3310.00306.7612.9236.2538.570.413.061.1320.00326.1615.1740.5843.369.515.563.9340.00335.8216.3242.9045.969.214.762.4350.00346.4730.21.5952.4356.767.617.160.1370.00364.7320.1249.9053.868.016.659.5360.00355.1418.7047.4651.068.515.763.5360.0037	160.00	159.46	2.40	10.55	10.8	77.2	8.1	82.2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	170.00	169.36	2.61	11.95	12.2	77.7	8.3	80.1
190.00189.143.1814.8315.277.98.876.4200.00208.894.0817.8518.377.19.570.5220.00218.744.6919.4320.076.410.167.2230.00228.585.3721.1121.875.710.667.2240.00238.406.1322.8523.775.011.266.0250.00248.196.9624.6626.674.312.465.4260.00257.957.9026.6727.873.512.965.0270.00267.708.6728.6330.072.212.463.3300.00297.2410.8632.4034.271.512.161.3310.00306.7612.9236.2538.570.413.061.1320.00326.1615.1740.5843.369.515.563.9340.00335.8216.3242.9045.969.214.762.4350.00345.4917.4745.1648.468.914.762.4360.00374.3021.5952.4356.767.317.761.7380.00374.3021.5952.4356.767.317.761.7380.00374.3021.5952.4356.767.317.761.7380.00374.3021.5977.68.670.017.563.5380.0037.	180.00	179.25	2.86	13.36	13.7	77.9	8.0	80.0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	190.00	189.14	3.18	14.83	15.2	77.9	8.8	76.4
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	200.00	199.02	3.59	16.34	16.7	77.6	9.0	74.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	210.00	208.89	4.08	17.85	20 0	76 4	9.5	67.9
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	220.00	228 58	5.37	21.11	21.8	75.7	10.6	67.2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	240.00	238.40	6.13	22.85	23.7	75.0	11.2	66.0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	250.00	248.19	6.96	24.68	25.6	74.3	12.4	65.4
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	260.00	257.95	7.90	26.67	27.8	73.5	12.9	65.0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	270.00	267.70	8.87	28.63	30.0	72.8	12.4	63.3
290.00287.2410.8634.4034.1211.8634.1211.811.7<	280.00	277.47	9.86	30.55	32.1	72.1	12.5	61.3
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	290.00	287.24	11.86	34.26	36.3	70.9	12.7	62.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	310.00	306.76	12.92	36.25	38.5	70.4	13.0	61.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	320.00	316.47	14.04	38.37	40.9	69.9	14.2	62.7
340.00 335.82 16.32 42.90 45.9 69.2 14.7 63.8 350.00 345.49 17.47 45.16 48.4 68.9 14.7 62.4 360.00 355.14 18.70 47.46 51.0 68.5 15.7 60.1 370.00 364.73 20.12 49.90 53.8 68.0 16.6 59.5 380.00 374.30 21.59 52.43 56.7 67.6 17.1 60.1 390.00 383.83 23.07 55.05 59.7 67.3 17.7 61.7 400.00 393.37 24.46 57.70 62.7 67.0 17.5 63.5 410.00 402.91 25.72 60.43 65.7 66.9 18.0 66.9 420.00 412.43 26.90 63.27 68.8 67.0 18.1 69.4 430.00 421.94 27.95 66.17 71.8 67.1 18.4 71.0 440.00 431.40 28.93 69.26 75.1 67.3 19.6 74.6 450.00 450.17 30.54 75.97 81.9 68.1 20.4 78.4 470.00 459.53 31.13 79.43 85.3 68.6 20.1 82.6 490.00 468.90 31.61 82.89 92.0 69.6 20.1 88.3 50.00 459.53 32.52 93.35 96.9 70.8 21.4 88.3 50.0	330.00	326.16	15.17	40.58	43.3	69.5	15.5	63.9
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	340.00	335.82	16.32	42.90	45.9	69.2	14.7	63.8
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	350.00	345.49 355 14	17.47	40.10 47 44	40.4 51 0	68 5	15 7	60.1
380.00374.3021.5952.4356.767.617.160.1390.00383.8323.0755.0559.767.317.761.7400.00393.3724.4657.7062.767.017.563.5410.00402.9125.7260.4365.766.918.066.9420.00412.4326.9063.2768.867.018.169.4430.00421.9427.9566.1771.867.319.674.6440.00431.4028.9369.2675.167.319.674.6450.00440.7929.7972.5778.467.720.577.3460.00450.1730.5475.9781.968.120.478.4470.00459.5331.1379.4385.368.620.482.0480.00468.9031.6182.8988.769.120.682.6490.00479.3032.0186.2992.086.620.183.5500.00506.2932.5293.3596.970.821.488.3520.00506.2932.5997.06102.471.421.988.5530.00515.5432.60100.84106.072.122.390.6540.00543.0831.85112.72117.174.223.695.2570.00524.7632.47104.72109.672.823.493.8 <td< td=""><td>370.00</td><td>364.73</td><td>20.12</td><td>49.90</td><td>53.8</td><td>68.0</td><td>16.6</td><td>59.5</td></td<>	370.00	364.73	20.12	49.90	53.8	68.0	16.6	59.5
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	380.00	374.30	21.59	52.43	56.7	67.6	17.1	60.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	390.00	383.83	23.07	55.05	59.7	67.3	17.7	61.7
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	400.00	393.37	24.46	57.70	62.7	67.0	17.5	63.5
420.00 412.43 27.95 66.17 71.8 67.1 18.4 71.0 430.00 421.94 27.95 66.17 71.8 67.1 18.4 71.0 440.00 431.40 28.93 69.26 75.1 67.3 19.6 74.6 450.00 440.79 29.79 72.57 78.4 67.7 20.5 77.3 460.00 450.17 30.54 75.97 81.9 68.1 20.4 78.4 470.00 459.53 31.13 79.43 85.3 68.6 20.4 82.0 480.00 468.90 31.61 82.89 88.7 69.1 20.6 82.6 490.00 478.30 32.01 86.29 92.0 69.6 20.1 83.5 500.00 487.67 32.34 69.75 95.4 70.2 20.9 86.3 510.00 497.00 32.52 93.35 98.9 70.8 21.4 88.3 520.00 506.29 32.60 100.84 106.0 72.1 22.3 90.6 540.00 524.76 32.47 104.72 109.6 72.8 23.4 93.8 550.00 533.92 32.15 108.72 113.4 73.5 23.7 94.1 560.00 543.08 31.85 112.72 117.1 74.2 23.6 95.2 570.00 552.23 31.41 116.73 120.9 74.9 23.8 97.2 <t< td=""><td>410.00</td><td>402.91</td><td>25.72</td><td>60.43</td><td>65.7</td><td>67.0</td><td>18.0</td><td>60.3</td></t<>	410.00	402.91	25.72	60.43	65.7	67.0	18.0	60.3
430.00 421.92 28.93 69.26 75.1 67.3 19.6 74.6 440.00 431.40 28.93 69.26 75.1 67.3 19.6 74.6 450.00 440.79 29.79 72.57 78.4 67.7 20.5 77.3 460.00 450.17 30.54 75.97 81.9 68.1 20.4 78.4 470.00 459.53 31.13 79.43 85.3 68.6 20.4 82.0 480.00 468.90 31.61 82.89 88.7 69.1 20.6 82.6 490.00 478.30 32.01 86.29 92.0 69.6 20.1 83.5 500.00 487.67 32.34 69.75 95.4 70.2 20.9 86.3 510.00 497.00 32.52 93.35 98.9 70.8 21.4 88.3 520.00 506.29 32.59 97.06 102.4 71.4 21.9 88.5 530.00 515.54 32.60 100.84 106.0 72.1 22.3 90.6 540.00 524.76 32.47 104.72 109.6 72.8 23.4 93.8 550.00 533.92 32.15 112.72 117.1 74.2 23.6 95.2 570.00 552.23 31.41 116.73 120.9 74.9 23.8 97.2 580.00 561.35 30.93 120.80 124.7 75.6 24.6 96.9 <	420.00	412.43	20.30	66 17	71.8	67.1	18.4	71.0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	440.00	431.40	28.93	69.26	75.1	67.3	19.6	74.6
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	450.00	440.79	29.79	72.57	78.4	67.7	20.5	77.3
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	460.00	450.17	30.54	75.97	81.9	68.1	20.4	78.4
480.00 468.90 31.61 82.89 88.7 69.1 20.8 82.8 490.00 478.30 32.01 86.29 92.0 69.6 20.1 83.5 500.00 487.67 32.34 69.75 95.4 70.2 20.9 86.3 510.00 497.00 32.52 93.35 98.9 70.8 21.4 88.3 520.00 506.29 32.59 97.06 102.4 71.4 21.9 88.5 530.00 515.54 32.60 100.84 106.0 72.1 22.3 90.6 540.00 524.76 32.47 104.72 109.6 72.8 23.4 93.8 550.00 533.92 32.15 108.72 113.4 73.5 23.7 94.1 560.00 543.08 31.85 112.72 117.1 74.2 23.6 95.2 570.00 552.23 31.41 116.73 120.9 74.9 23.8 97.2 580.00 561.35 30.93 120.80 124.7 75.6 24.6 96.9 </td <td>470.00</td> <td>459.53</td> <td>31.13</td> <td>79.43</td> <td>85.3</td> <td>69.6</td> <td>20.4</td> <td>82.0</td>	470.00	459.53	31.13	79.43	85.3	69.6	20.4	82.0
490.00 478.30 32.01 88.29 92.0 63.6 20.1 83.5 500.00 487.67 32.34 69.75 95.4 70.2 20.9 86.3 510.00 497.00 32.52 93.35 98.9 70.8 21.4 88.3 520.00 506.29 32.59 97.06 102.4 71.4 21.9 88.5 530.00 515.54 32.60 100.84 106.0 72.1 22.3 90.6 540.00 524.76 32.47 104.72 109.6 72.8 23.4 93.8 550.00 533.92 32.15 108.72 113.4 73.5 23.7 94.1 560.00 543.08 31.85 112.72 117.1 74.2 23.6 95.2 570.00 552.23 31.41 116.73 120.9 74.9 23.8 97.2 580.00 561.35 30.93 120.80 124.7 75.6 24.6 96.9 590.00 570.43 30.28 124.93 128.6 76.4 25.1 100.	480.00	468.90	31.61	82.89	88.7	99.1 80 8	20.6	02.0 92 5
500.00 407.07 32.52 93.35 98.9 70.8 21.4 88.3 510.00 506.29 32.59 97.06 102.4 71.4 21.9 88.5 520.00 506.29 32.59 97.06 102.4 71.4 21.9 88.5 530.00 515.54 32.60 100.84 106.0 72.1 22.3 90.6 540.00 524.76 32.47 104.72 109.6 72.8 23.4 93.8 550.00 533.92 32.15 108.72 113.4 73.5 23.7 94.1 560.00 543.08 31.85 112.72 117.1 74.2 23.6 95.2 570.00 552.23 31.41 116.73 120.9 74.9 23.8 97.2 580.00 561.35 30.93 120.80 124.7 75.6 24.6 96.9 590.00 570.43 30.28 124.93 128.6 76.4 25.1 100.1 598.82 578.40 29.70 128.67 132.1 77.0 26.3	490.00	478.30	32.01	80.23 89.75	95.4	70.2	20.9	86.3
520.00 506.29 32.59 97.06 102.4 71.4 21.9 88.5 530.00 515.54 32.60 100.84 106.0 72.1 22.3 90.6 540.00 524.76 32.47 104.72 109.6 72.8 23.4 93.8 550.00 533.92 32.15 108.72 113.4 73.5 23.7 94.1 560.00 543.08 31.85 112.72 117.1 74.2 23.6 95.2 570.00 552.23 31.41 116.73 120.9 74.9 23.8 97.2 580.00 561.35 30.93 120.80 124.7 75.6 24.6 96.9 590.00 570.43 30.28 124.93 128.6 76.4 25.1 100.1 598.82 578.40 29.70 128.67 132.1 77.0 26.3 94.2	510.00	497.00	32.52	93.35	98.9	70.8	21.4	88.3
530.00515.5432.60100.84106.072.122.390.6540.00524.7632.47104.72109.672.823.493.8550.00533.9232.15108.72113.473.523.794.1560.00543.0831.85112.72117.174.223.695.2570.00552.2331.41116.73120.974.923.897.2580.00561.3530.93120.80124.775.624.696.9590.00570.4330.28124.93128.676.425.1100.1598.82578.4029.70128.67132.177.026.394.2	520.00	506.29	32.59	97.06	102.4	71.4	21.9	88.5
540.00524.7632.47104.72109.672.823.493.8550.00533.9232.15108.72113.473.523.794.1560.00543.0831.85112.72117.174.223.695.2570.00552.2331.41116.73120.974.923.897.2580.00561.3530.93120.80124.775.624.696.9590.00570.4330.28124.93128.676.425.1100.1598.82578.4029.70128.67132.177.026.394.2	530.00	515.54	32.60	100.84	106.0	72.1	22.3	90.6
550.00 533.92 32.15 108.72 113.4 73.5 23.7 94.1 560.00 543.08 31.85 112.72 117.1 74.2 23.6 95.2 570.00 552.23 31.41 116.73 120.9 74.9 23.8 97.2 580.00 561.35 30.93 120.80 124.7 75.6 24.6 96.9 590.00 570.43 30.28 124.93 128.6 76.4 25.1 100.1 598.82 578.40 29.70 128.67 132.1 77.0 26.3 94.2	540.00	524.76	32.47	104.72	109.6	72.8	23.4	93.8
560.00 543.08 31.85 112.72 117.1 74.2 23.6 95.2 570.00 552.23 31.41 116.73 120.9 74.9 23.8 97.2 580.00 561.35 30.93 120.80 124.7 75.6 24.6 96.9 590.00 570.43 30.26 124.93 128.6 76.4 25.1 100.1 598.82 578.40 29.70 128.67 132.1 77.0 26.3 94.2	550.00	533.92	32.15	108.72	113.4	73.5	23.7	94.1 GE 9
580.00 561.35 30.93 120.80 124.7 75.6 24.6 96.9 590.00 570.43 30.28 124.93 128.6 76.4 25.1 100.1 598.82 578.40 29.70 128.67 132.1 77.0 26.3 94.2	560.00	543.08 EE2 23	51.85 31 41	116 73	120.9	74.9	23.9	97.2
590.00 570.43 30.28 124.93 128.6 76.4 25.1 100.1 598.82 578.40 29.70 128.67 132.1 77.0 26.3 94.2	570.00 580 00	561.35	30.93	120.80	124.7	75.6	24.6	96.9
598.82 578.40 29.70 128.67 132.1 77.0 26.3 94.2	590.00	570.43	30.28	124.93	128.6	76.4	25.1	100.1
	598.82	578.40	29.70	128.67	132.1	77.0	26.3	94.2





LOG PARAMETERS

ELECT. CUTOFF : 99999

MATRIX DENSITY: 2.65

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MAGNETIC DECL: 17.00

PRESENTATION NAME/DATE = 9067A_530.0 10/04/2007

MATRIX DELTA T : 177 BIT SIZE : 13 VERSION = 3.64EK

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TOOL CALIBRATION 3045 10/12/07 02:39 TOOL 9067A TM VERSION 1 SERIAL NUMBER 530 RESPONSE DATE TIME SENSOR STANDARD [CPS] [CPS] [CPS] [CPS] Jun26,06 Jun26,06 Jun26,06 11:00:19 Default [CPS] Default GAMMA 1 [CPS] [CPS] [CPS] 11:00:19 GAMMA Default Default Default 2 NEUTRON Default 11:00:19 Default NEUTRON Default Jun26,06 11:00:19



i.

CLIENT	: ELK VALLEY COAL COR HOLE	ID. : 3045
FIELD OFFICE	: PENHOLD DATE	of log : 10/13/07
DATA FROM	: N/A PROB	🗈 : 9057 x , 4430
MAG. DECL.	: 17.000 DEPT	h units : meters
LOG: 3045_10-	13-07_12-37_9057A02_10.00_4	479.99_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG S	BANGB
10.02	10.02	0.00	-0.00	0.0	303.1	0.5	303.1
20.00	20.00	0.12	-0.14	0.2	308.8	1.9	313.3
30.00	29.99	0.46	-0.45	0.6	315.3	2.6	320.3
40.00	39.97	0.88	-0.73	1.1	320.1	2.4	328.1
50.00	49.97	1.25	-0.91	1.5	324.0	2.1	341.5
60.00	59.96	1.62	-0.96	1.9	329.3	2.3	1.9
70.00	69.95	2.04	-0.94	2.2	335.2	2.4	10.1
80.00	79.94	2.43	-0.82	2.6	341.3	2.4	23.9
90.00	89.93	2.83	-0.65	2.9	347.0	2.5	22.1
100.00	99.92	3.22	-0.50	3.3	351.1	2.4	21.2
110.00	109.91	3.61	-0.35	3.6	354.4	2.1	18.4
120.00	119.91	3.99	-0.22	4.0	356.8	2.2	16.8
130.00	129.90	4.35	-0.07	4.4	359.1	2.4	24.6
140.00	139.89	4.70	0.09	4.7	1.1	2.3	26.2
150.00	149.88	5.10	0.29	5.1	3.3	3.1	23.2
160.00	159.87	5.54	0.59	5.6	6.1	3.6	50.5
170.00	169.84	5.98	1.12	6.1	10.7	4.2	55.5
180.00	179.82	6.32	1.73	6.6	15.3	4.4	60.6
190.00	189.79	6.68	2.44	7.1	20.1	4.8	65.1
200.00	199.75	7.03	3.24	7.7	24.8	5.2	69.0
210.00	209.70	7.36	4.12	8.4	29.3	5.6	71.7
220.00	219.65	7.68	5.10	9.2	33.6	6.1	70.8
230.00	229.59	8.05	6.15	10.1	37.4	6.6	70.3
240.00	239.52	8.44	7.27	11.1	40.7	7.6	74.5
250.00	249.42	8.75	8.66	12.3	44.7	8.8	79.8
260.00	259.27	8,99	10.36	13.7	49.0	10.8	82.8
270.00	269.06	9.17	12.36	15.4	53.4	12.5	86.6
280.00	278.78	9.30	14.72	17.4	57.7	14.7	87.0
290.00	288.40	9.43	17.43	19.8	61.6	17.0	86.5
300.00	297.90	9.50	20.57	22.7	65.2	19.2	91.1
310.00	307.28	9,49	24.03	25.8	68.4	21.5	91.4
320,00	316.52	9.38	27.84	29.4	71.4	23.4	92.2
330.00	325.61	9.24	32.02	33.3	73.9	26.1	93.2
340.00	334.51	8.99	36.55	37.6	76.2	27.9	93.4
350.00	343.25	8.66	41.40	42.3	78.2	30.1	94.2
360.00	351.82	8.25	46.53	47.3	79.9	32.5	95.1
370.00	360.20	7.69	51.96	52.5	81.6	33.6	96.8
380.00	368.52	6.97	57.46	57.9	83.1	34.3	97.6
390.00	376.63	6.04	63.24	63.5	84.5	37.3	100.2
400.00	384.50	5.04	69.32	69.5	85.8	38.6	98.9
410.00	392.29	4.10	75.52	75.6	86.9	39.8	96.1
420.00	400.05	3.07	81.74	81.8	87.8	39.0	100.2
430.00	407.76	1.90	88.01	88.0	88.8	40.4	101.8
440.00	415.34	0,54	94.38	94.4	89.7	40.6	102.7
450.00	422.90	-0.97	100.75	100.8	90.6	41.0	103.6
460.00	430.47	-2.56	107.09	107.1	91.4	40.9	105.5
470.00	438.03	-4.25	113.41	113.5	92.1	41.0	104.7
479.82	445.43	-5.90	119.65	119.8	92.8	41.3	103.9



DENSITY OPEN HOLE 1:200 3046 10/16/07

LOG PARAMETERS

ELECT. CUTOFF : 99999

NEUTRON MATRIX : SANDSTONE

MATRIX DENSITY: 2.65 MAGNETIC DECL: 17.00 PRESENTATION NAME/DATE = 9239-PRINT-RES.0 10/13/2007 MATRIX DELTA T: 177 BIT SIZE : 13.00 VERSION = 3.64EK

	(3046	
COMPANY	ELK VALLEY	OAL CORPORATION	
WELL	3046		9239
FIELD	FORDING RN	ER OPERATIONS	0057
COUNTRY	CANADA		9227
PROVINCE	BC		
LOCATION	NIA		
SECTION	NIA		
TOWNSHIP	N/A		
RANGE	N/A		
LICENCE NO.	NIA		
UNIQUE WELL ID.	NIA		
PERMANENT DATUM	ē	ELEVATION KB N/A	
LOG MEASURED FROM	N.GL	ELEVATION DF N/A	
DRL MEASURED FROM	N.GL	ELEVATION GL N/A	
DATE	10/15/07		
DEPTH DRILLER	:413.00		
BIT SIZE	:13		
LOG TOP	20,47		
LOG BOTTOM	:412.67		
CASING LOGGER	NIA		
CASING DRILLER	:17		
CASING TYPE	STEEL		
BOREHOLE FLUID	MATER		
RM TEMPERATURE	N/A		
MUD RES	A/N		
MUD WEIGHT	1.0		
WITNESSED BY	SDS DRILLING		
RECORDED BY	A.SPASKYY		
REMARKS 1			
REMARKS 2	••		
ALL SER	VICES PROVID	D SUBJECT TO STANDARD TERMS AND CO	ONDITIONS

NEUTRON THRU DRILL PIPE 1:200 3046 10/15/07 LOG PARAMETERS

NEUTRON MATRIX : SANDSTONE

MATRIX DENSITY : 2.65 MAGNETIC DECL : 17.00 PRESENTATION NAME/DATE = 9067A.0 07/12/2007

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ELECT. CUTOFF : 99999

MATRIX DELTA T: 177 BIT SIZE : 13 VERSION = 3.64EK



TOOL CALIBRATION 3046 10/15/07 21:59 TOOL 9067A TM VERSION 1 SERIAL NUMBER 530 TIME DATE Jun26,06 11:00:19 11:00:19 Jun26,06

1

SENSOR GAMMA GAMMA

STANDARD [CPS] Default [CPS] Default

RESPONSE Default [CPS] [CPS] Default



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CLIENT	: ELK VALLEY COAL	COR HOLE ID.	: 3046
DATA FROM	: N/A	PROBE	: 9057 A , 4430
MAG. DECL. LOG: 3046 10-	: 17.000 -16-07 16-33 9057A	DEPTH UNITS .02 5.00 412.96 D	: METERS EVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	A2 IMUTH	SANG S.	angb
5.00	5.00	0.00	-0.00	0.0	274.9	1.5	274.9
15.00	14.99	0.07	-0.35	0.4	281.4	2.6	282.7
25.00	24.98	0.21	-0.80	0.8	284.6	2.8	293.5
35.00	34.97	0.37	-1.22	1.3	287.0	2.6	296.3
45.00	44.96	0.63	-1.63	1.7	291.2	3.2	304.4
55.00	54.95	0.94	-2.05	2.3	294.6	2.5	308.2
65.00	64.93	1.28	-2.43	2.7	297.8	2.6	313.1
75.00	74.93	1.56	-2.71	3.1	299.9	2.1	314.1
85.00	84.92	1.81	-2.95	3.5	301.5	2.0	320.1
95.00	94.91	2.06	-3.12	3.7	303.5	1.5	331.6
105.00	104.91	2.33	-3.20	4.0	306.1	2.0	350.3
115.00	114.91	2.65	-3.27	4.2	309.1	1.6	347.1
125.00	124.90	2.95	-3.26	4.4	312.1	1.9	10.5
135.00	134.89	3.35	-3.04	4.5	317.7	3.0	35.1
145.00	144.88	3.79	-2.73	4.7	324.2	3.1	36.4
155.00	154.85	4.31	-2.33	4.9	331.5	4.4	35.5
165.00	164.82	4.86	-1.79	5.2	339.8	5.1	48.5
175.00	174.78	5.45	-1.06	5.6	348.9	5.6	51.1
185.00	184.72	6.11	-0.17	6.1	358.4	7.2	55.0
195.00	194.63	6.86	0.91	6.9	7.5	7.7	59.7
205.00	204.53	7.46	2.19	7.8	16.4	8.7	68.6
215.00	214.40	8.06	3.67	8.9	24.5	9.7	68.0
225.00	224.25	8.68	5.29	10.2	31.4	10.3	71.3
235.00	234.09	9.16	7.02	11.5	37.5	10.6	79.1
245.00	243.90	9.42	8.92	13.0	43.4	12.1	84.9
255.00	253.66	9.47	11.08	14.6	49.5	13.2	90.0
265.00	263.37	9.34	13.47	16.4	55.3	14.4	96.1
275.00	273.02	8.95	16.05	18.4	60.9	15.7	101.3
285.00	282.63	8.35	18.78	20.6	66.0	16.5	103.2
295.00	292.21	7.69	21.56	22.9	70.4	17.0	103.4
305.00	301.71	6.88	24.57	25.5	74.3	19.0	104.9
315.00	311.09	5.84	27.86	28.5	78.2	21.4	107.9
325.00	320.33	4.59	31.48	31.8	81.7	23.9	109.2
335.00	329.43	3.09	35.35	35.5	85.0	25.0	110.7
345.00	338.43	1.61	39.45	39.5	87.7	26.5	111.0
355.00	347.31	-0.05	43.73	43.7	90.1	27.9	112.0
365.00	356.11	-1.99	48.07	48.1	92.4	29.4	115.4
375.00	364.75	-4.28	52.55	52.7	94.7	31.3	117.4
385.00	373.30	-6.69	57.14	57.5	96.7	31.3	117.1
395.00	381.76	-9.26	61.82	62.5	98.5	32.7	118.7
405.00	390.08	-12.00	66.63	67.7	100.2	34.3	119.5
412.78	396.51	-14.23	70.40	71.8	101.4	34.3	120.4



VERSION = 3.64EK



1.00 500.00

NEUTRON NEUTRON

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CLIENT	: ELK VALLEY COAL C	COR HOLE ID. : 3047
FIELD OFFICE	: PENHOLD	DATE OF LOG : 10/05/07
DATA FROM	: N/A	PROBE : 9057A , 4430
MAG. DECL.	: 17.000	DEPTH UNITS : METERS
LOG: 3047_10-	-05-07_21-19_9057A	.02_24.49_557.30_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	ASTMITTH	SANG SI	NIGB
30.00	29.99	-0.03	-0.04	0.1	237.5	1.8	323.7
40.00	39,98	0.19	0.23	0.3	51.2	2.8	52.2
50.00	49.97	0.52	0.68	0.9	52.7	4.2	52.9
60.00	59.93	0.98	1.33	1.6	53.6	5.4	55.8
70.00	69.89	1.55	2.08	2.6	53.2	5.7	51.3
80.00	79.83	2.15	2.95	3.6	53.9	6.6	61.9
90.00	89.75	2.74	4.05	4.9	55.9	7.8	65.1
100.00	99.66	3.32	5.32	6.3	58.0	8.3	66.4
110.00	109.54	3.90	6.74	7.8	59.9	9.0	68.0
120.00	119.40	4.42	8.29	9.4	61.9	9.8	73.2
130.00	129.23	4.87	10.07	11.2	64.2	11.3	78.3
140.00	139.01	5.17	12.16	13.2	67.0	12.7	84.3
150.00	148.75	5.18	14.41	15.3	70.2	13.4	92.0
160.00	158.45	5.03	16.84	17.6	73.4	15.1	94.9
170.00	168.07	4.79	19.55	20.1	76.2	16.6	97.9
180.00	177.62	4.26	22.45	22.9	79.2	17.5	104.6
190.00	187.14	3.33	25.34	25.6	82.5	14.9	116.1
200.00	196.57	2.07	28.44	28.5	85.8	20.7	113.0
210.00	205.87	0.61	31.81	31.8	88.9	22.5	114.1
220.00	215.14	-0.81	35.27	35.3	91.3	21.4	110.0
230.00	224.40	-1.95	38.85	38.9	92.9	22.7	106.1
240.00	233.55	-3.18	42.70	42.8	94.3	24.6	108.0
250.00	242.63	-4.43	46.70	46.9	95.4	24.6	105.5
260.00	251.70	-5.44	50.78	51.1	96.1	25.0	103.1
270.00	260.74	-6.37	54.96	55.3	96.6	25.5	102.8
280.00	269.72	-7.23	59.26	59.7	97.0	26.3	101.9
290.00	278.72	-7.94	63.55	64.0	97.1	26.1	97.8
300.00	287.68	-8.56	67.96	68.5	97.2	26.4	96.2
310.00	296.66	-9.00	72.32	72.9	97.1	25.7	95.0
320.00	305.68	-9.35	76.63	77.2	97.0	25.2	95.0
330.00	314.69	-9.65	80.97	81.5	96.8	26.0	94.1
340.00	323.63	-9.88	85.42	86.0	96.6	26.9	94.5
350.00	332.52	-10.23	90.00	90.6	96.5	27.9	93.9
360.00	341.34	-10.63	94.69	95.3	96.4	28.4	94.4
370.00	350.12	-11.05	99.45	100.1	96.3	28.8	95.5
380.00	358.86	-11.53	104.30	104.9	96.3	29.0	96.0
390.00	367.56	-12.05	109.20	109.9	96.3	29.5	96.8
400.00	376.24	-12.66	114.13	114.8	96.3	30.3	98.1
410.00	384.92	-13.37	119.04	119.8	96.4	29.6	98.6
420.00	393.59	-14.19	123.96	124.8	96.5	30.6	100.1
430.00	402.18	-15.33	128.95	129.9	96.8	31.6	105.4
440.00	410.72	-16.67	133.97	135.0	97.1	30.6	105.2
450.00	419.30	-18.06	138.92	140.1	97.4	30.8	108.1
460.00	427.84	-19.71	143.85	145.2	97.8	31.6	108.8
470.00	436.35	-21.43	148.81	150.3	98.2	32.0	109.9
480.00	444.77	-23.37	153.84	155.6	98.6	33,4	111.9
490.00	453.11	-25.45	158.94	161.0	99.1	33.6	113.4
500.00	461.48	-27.56	163.99	166.3	99.5	32.8	113.0
510.00	469.88	-29.68	168.99	171.6	100.0	33.3	112.7
520.00	478.15	-31.89	174.15	177.0	100.4	35.0	113.3
530.00	486.31	-34.04	179.50	182.7	100.7	35.4	109.3
540.00	494.53	-36.18	184.77	188.3	101.1	34.6	112.6
550.00	502.72	-38.37	190.08	193.9	101.4	35.5	112.5
557.12	508.51	-39.88	193.93	198.0	101.6	36.0	111.0