G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6802

DRILLHOLE/TRAVERSE :	81-DH072	COLLAR ELEVATION:	1253.00	AZIMUTH(DEG) :	18.00	GEOLOGGED BY :	HDG +
TOTAL DEPTH/LENGTH :	203.00	NORTHING(- IF S):	7002550.00	VERTICAL ANGLE :	-75.00	DATE (YY/MM/DD):	810618
CORE/HOLE DIAMETER :	HQ	EASTING (- IF W):	436733.94	CO-ORD SYSTEM :		PROJECT NUMBER :	J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	33.22	17.00	-74.00
2	48.46	18.00	-74.00
3	63.70	20.00	-73.33
4	78.94	19.00	-73.00
5	94.18	23.00	-72.50
6	109.42	23.00	-72.25
7	124.66	24.00	-72.25
8	139.90	26.00	-72.00
9	155.14	25.00	-72.00
10	170.38	25.00	-72.50
11	185.62	26.00	-73.00
12	200.86	25.00	-73.00

R HED DRILL HOLE 81-DH072 WAS DIRECTED AT THE MAIN ORE ZONE BETWEEN

R HED INTERSECTIONS 77-DH022 AND 78-DH027, IN ORDER TO OBTAIN

R HED SUPPLEMENTARY INFORMATION FOR GRADE AND TONNAGE ESTIMATES.

R HED THE ORE INTERSECTION EXTENDED FROM 162.28 TO 191.81 METRES, WITH

R HED AVERAGE GRADES OF 9.27% ZN, 2.09% PB, 9.85% FE AND 0.05% BA.

R HED CU VALUES WERE BELOW DETECTION LIMITS AND AG WAS LESS THAN

R HED 0.05% OZ. PER TON. THE ORE ZONE INTERSECTION IS 686 METRES FROM

R HED THE ZERO BASELINE AT AN ELEVATION OF 1087 METRES ABOVE SEALEVEL.

R HED BASED ON CORE BEDDING ANGLES, THE TRUE THICKNESS OF THE ORE ZONE

R HED IS ESTIMATED AS BEING 9.0 METRES. CORE RECOVERY IN THE ORE ZONE

R HED WAS 70.2%.

R HED STRATIGRAPHIC CORRELATIONS WERE POSSIBLE USING THE SANDSTONE

R HED MARKER BEDS C, B, A AND D. THE ORE ZONE IS SIMILAR TO 81-DH071,

R HED IN THAT IT IS A SILICATE HOSTED LAMINATED SULPHIDE. A BLUE OXIDE

R HED MINERAL WAS OBSERVED TO OCCUR WITHIN THE HANGING WALL SEDIMENTS.

	F - INTERVAL -			CORE	T- %		TYPI-	QAL	TEX-		GRAIN				PGI	STRUCTUR-1					ALTERATION MINS					ORE-TYPE MINS				SUMMARY	
K	L (UNITS = . DEC.PLACE)			RECOV-	M	M	ROCK	FYING	MIN	TURES		CHARACS									H	H	H	H	H	ANY	H	H	H	ANY	ALT	ORE
E	A (MT=METRIC FT=FOOTRIC)			ERY	O	I		TM	TM	MAT	TX	TX	F	C	%	M	ARG	/RI	T	ID	STK	DIP	A	A	A	A	A	MIN	A	A	A	MIN	-	-	-	-
Y	G FROM - TO -		INT	(.)	O	X	TYPE	1	2	QM1	1	2	F	F	C	A			1		AZM	RT	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A	1	A	2
K	F			ROCK	FM		RT		TM	QM2	TX	TX	S	C	D	O	CHT		T	ID	STK	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA				
E	L			QUAL	AGE	EN-	O	LC-	3		3	4	O			/			2		AZM	RT	H	H	H	H	H	H	H	H	H	H	1		1	
Y	G			DESIG		VIR		COL					R			C				STRUCTUR-2			A	A	A	A	A	A	A	A	A	A		2		2

R SVY 0.00 0.00 SPERRY-SUN MULTI-SHOT RESULTS.

/ OVB 0.00 8.84 8.84 OVER P

/ CON 8.84 31.09 22.25 BRHT *S= G; SC MQ5 P FO 75 D)
L 4 *C1 F* B* 2 = LP3

/ CON 31.09 36.88 5.79 ARGL GR MX 0 1 . 1 P <. <*
L 1 9

/ CON 36.88 40.94 4.06 BRPM *C= H* KQ3 P R)
L 3 B* R* 3 KN1

/ FLT 40.94 65.03 24.09 ARGL CR GG= MX 0 3 = 1 P LM 72 L+
L 1 LM 8

/ 40.94 65.03 24.09 2 BRHT GR *C) F* 2 KM1 R R=
L 1 H* B* JM2
R 40.94 65.03 THIS INTERVAL APPEARS TO BE A CARBONACEOUS ARGILLITE WITH
R 40.94 65.03 INTERCALATED HETEROLITHIC BRECCIA. THE BRECCIA BEDS AVERAGE 20
R 40.94 65.03 CMS IN THICKNESS. THE ALTERNATIVE IS THAT THE WHOLE INTERVAL IS
R 40.94 65.03 A HETEROLITHIC BRECCIA WITH ARGILLITE FRAGMENTS OF 2 METERS IN
R 40.94 65.03 SIZE.

/ CON 65.03 71.30 6.27 BRHT *C= F* NT5 P <. R)
L 4 R* 3 LO2
R 65.03 71.30 THE MAJOR VOLUME OF PYRITE IS FOUND AS LAMINATIONS WITHIN THE
R 65.03 71.30 SILT BANDED ARGILLITE FRAGMENTS.

K M/C 71.30 71.30 0.00

/ 71.30 75.05 3.75 SAND SN8 G; BD 1383 P 2 BD U65 D)
L 5 SI1 // 8

/ 72.84 75.05 2.21 3 BRPM *C= G; H* KM2 R D)
L 5 B* 5 KM4
R 72.84 75.05 THERE ARE FOUR DISTINCT NORMAL GRADED SEQUENCES THAT OCCUR
R 72.84 75.05 WITHIN THE SAND P.G.I. AND GRADE FROM A PEBBLY MUDSTONE WITH
R 72.84 75.05 A SANDSTONE MATRIX.

/ CON 75.05 86.67 11.62 BRHT GR *C) R* MT7 P R+

K E Y	F -L-	FROM	- TO -	INT	RECOV RQD	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX	TX	F S	C C	% O	M O	ARG CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		78.77	79.74	0.97		9	SAND		5	SI= GI SN9			0	3	9	5		R										D)				
L														7																		
/	FLT	84.20	84.71	0.51		X	BRHT	CR	CR	GG9		R*					MT7	R										R+				
L									1					2			KN1															
R		84.20	84.71	THE CORE IS BROKEN AND SHEARED IN MANY PLACES, WHICH INDICATES																													
R		84.20	84.71	THIS INTERVAL MAY HAVE BEEN FAULTED.																													
K	M/B	86.67	86.67	0.00																													
/		86.67	87.99	1.32			SAND			SN9 MX			1	3	9	4		P										D)				
L									4					8																		
/	CON	87.99	100.71	12.72			CGBR			*C= G;		R*					LS3	P										R)				
L									5			H* B*	5				MP6															
/	FLT	99.06	100.71	1.65		X	CGBR	GR		G68 G;		R*					LS3	R										R)				
L									2			H* B*	5				MP6															
R		99.06	100.71	THE CHERT PEBBLE MATRIX EXHIBITS NORMAL GRADING IN SEVERAL																													
R		99.06	100.71	SEPARATE CYCLES.																													
/	CON	100.71	111.97	11.26			CGBR			G;		R*					LR1	P										R)				
L									5	*C= H* B*			7				LP8															
K	M/A	101.91	101.91	0.00																													
/		101.91	111.97	10.06		3	BRPM			*C* G;		R*	3	4	7	7	LP1	R		F0		U65						R+				
L									5			H*		7			LP2															
R		101.91	111.97	SEVERAL CYCLES OF CGBR GRADE INTO A COARSE PEBBLY MUDSTONE																													
R		101.91	111.97	WITH A SANDSTONE MATRIX. THERE ARE 3 PEBBLY MUDSTONE BEDS THAT																													
R		101.91	111.97	GRADE GRADUALLY INTO THE CHERT PEBBLE BRECCIA. THE FIRST PEBBLY																													
R		101.91	111.97	MUDSTONE BED EXTENDS FROM 101.71 TO 104.71 M, THE SECOND																													
R		101.91	111.97	EXTENDS FROM 106.44 TO 106.93 M AND THE FINAL BED EXTENDS FROM																													
R		101.91	111.97	111.51 TO 111.97 M.																													
/	CON	111.97	113.89	1.92			BRHT			*C)		R*					LR8	P										D)				
L									3				1				KO1															
/		113.29	113.89	0.60		9	CGBR			*C2		R*					KL1	R										#2				
L									5			B*	6				KL6															
/	CON	113.89	117.23	3.34			ARGL	CR			MX	LM	0	1		1		P	0									D*				
L									1				9																			
/	CON	117.23	121.46	4.23			BRHT			*C= SS G;							LQ3	P										C+				
L									5			F* R*	3				LN3															
/		117.23	117.47	0.24		8	SAND			SN8 BD G;			1	3	9	3		R		BD		U55						L+				
L									5	SI=				9																		
/		118.07	118.43	0.36		9	SAND			SN8			1	3	8	3		R										L+				
L									5	SI2				8																		

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RU	TM LC	TM QM1 QM2	TX TX	F S	C C	% O O	M O O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/	CON	121.46	134.21	12.75			ARGL	CR		SC		0	4	+	5		P	0	LM		55					<(		D+				
L									2		LM		8																			
R		121.46	134.21				INTERCALATED,GRIT SIZED),CHERT FRAGMENTS ARE RESPONSIBLE FOR THE																											
R		121.46	134.21				LAMINATIONS WITHIN AN OTHERWISE MASSIVE ARGILLITE.																											
/		129.92	132.85	2.93		X	ARGL	CR		BR		0	4	+	5		R	0	LM		55	>+				<+		D+				
L																																
R		129.92	132.85				THE CORE IS HIGHLY SHEARED AND FRACTURED WITHIN THIS ZONE.																											
R		129.92	132.85				QUARTZ AND BARITE VEINS CROSSCUT THE ARGILLITE FRAGMENTS AND																											
R		129.92	132.85				MUDDY MATRIX. IN CERTAIN SECTIONS PYRITE REPLACES THE MUDSTONE																											
R		129.92	132.85				MATRIX AND BECOMES THE PREDOMINANT MINERAL.																											
K	M/O	134.21	134.21	0.00																												
/		134.21	135.32	1.11			SAND			G; BD		1	3	9	3		P		BD		U48						D+				
L									5				8																			
/	FLT	135.32	142.05	6.73			ARGL	CR	GG=			0	4	+	5		P	0	LM		U58					<.		R)				
L									2		LM		8																			
R		135.32	142.05				PYRITE IS FOUND WITHIN CHERT CLASTS AS A POSSIBLE REPLACEMENT																											
R		135.32	142.05				MINERAL. THE LAMINATIONS ARE DUE TO THE INTERCALATED, GRIT SIZED																											
R		135.32	142.05				CHERT FRAGMENTS.																											
/		138.26	138.46	0.20		8	MSSX	PY	SF	BR							R				<2						#5				
L								5Y																						**		
R		138.26	138.46				THE MASSIVE PYRITE, QUARTZ VEINING AND SPHALERITE BRECCIA																											
R		138.26	138.46				FRAGMENTS INDICATE THIS SECTION IS PART OF THE HANGING WALL																											
R		138.26	138.46				ALTERATION ASSOCIATED WITH THE ORE ZONE. THIS UNIT ALSO CONTAINS																											
R		138.26	138.46				ARGILLITE FRAGMENTS.																											
/	CON	142.05	145.89	3.84			BRHT	CR		SN=						MR4	P				<*						V+				
L								3A					2			JN2																
/		145.80	145.89	0.09		9	BRHT	CR		SN=						MR4	R				<*						>8				
L								3A					2			JN2																
R		145.80	145.89				A LARGE PYRITE VEIN CUTS THE ARGILLITE AND INCORPERATES ARGILLIC																											
R		145.80	145.89				FRAGMENTS INTO ITS MATRIX.																											
/	CON	145.89	146.77	0.88			SILT			SI3 G; BD		1	3	4	5		P	2	BD		U50						V=				
L								6		SN4			7																			
/	CON	146.77	151.40	4.63			BRPM			SN2 G; F*						L03	P								<(		<+				
L								3		*C+ B* R*		2				JN1																
/	FLT	148.00	148.13	0.13		X	BRPM			SN2 G; F*						L03	R								<(		<+				
L								3		*C+ B* R*		2				JN1																
/	FAL	151.40	158.30	6.90			BRHT	CR		*C= G; F*						MR4	P				<)				<)		R+				
L								3		R* B*		2				JN2																
R		151.40	158.30				THE CORE WITHIN THIS INTERVAL IS HIGHLY BROKEN AND SHEARED,																											

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	TX QM2	TX TX	F S	C C	% M O	ARG O	ARG CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA GS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		151.40	158.30																													
/		155.21	155.30	0.09			x	ARPM	SF		*C= G; F*						MR4	R							<)		<)		L1		B=	
L																																
R		155.21	155.30																													
R		155.21	155.30																													
/	CON	158.30	160.91	2.61				SILT		SI9	LM	SS	1	2	1	2		P	2	LM		75			<=		L=					
L									4	SN1			9																				
/		160.17	160.91	0.74		8	BRHT										KN2	R											L=			
L									5				4				KL1															
/	CON	160.91	162.28	1.37				ARGL	SF		LC		1	1	1			P	1	LM		70	Q2				L=					
L									5				9																L*			
/		161.83	161.93	0.10		6	ARGL	SF					1	1	1			R		FO		70	Q2				L=					
L									5				9																				
R		161.83	161.93																													
R		161.83	161.93				ARGL CONTAINS CLEAR HEXAGONAL QUARTZ IN VUGS AND CAVITIES.																													
/		161.93	162.28	0.35		9	SILT			SI9	LM	SS	1	2	1	2		R								<+		D+					
L									4	SN1			9																				
K	UM1	162.28	162.28	0.00																													
/	LSX	162.28	163.98	1.70				LMSX		CH8	LM							P	2	LM		74	E*			L)		L2			4		
L									8																					L=			
R		162.28	163.98				SIGNIFICANT ORE ZONE MINERALIZATION OCCURS IN THIS P.G.I.																													
/	LSX	163.98	167.03	3.05				LMSX	SF		LM							P	2	LM		64	L5		L2		L2			<(	4		
L									7R			LC																	L1				
R		163.98	167.03				THE MINERAL IDENTIFIED AS GRAPHITE COULD ALSO BE MAGENITE OR																													
R		163.98	167.03				SPECULAR/HEMATITE.																													
/	LSX	167.03	168.87	1.84				LMSX	SF		LM							P	2	LM		74	L8				L1		L(		4		
L									9																				L1				
/	CON	168.87	170.48	1.61				ARGL	CR	SF		MX	1	1	1			P					<2		B)				<C	4		
L									1				9																B)				
/	LSX	170.48	172.76	2.28				LMSX	SF		LM							P	2	LM		78	L5		L1		>3		L(		4		
L									8																				L2				
/	LSX	172.76	175.87	3.11				LMSX	SF	BA		LC						P		LM		87	L4		L2		L3				4		
L									8																				L1				
R		172.76	175.87				CARBONACEOUS ARGILLIC BEDS OF 1 CM THICKNESS ARE INTERBEDDED																													
R		172.76	175.87				WITH THE SULPHATE/SULPHIDE UNIT. THEY TOTAL LESS THAN 5% OF THE																													
R		172.76	175.87				TOTAL UNIT VOLUME.																													
/	LSX	175.87	177.21	1.34				LMSX	SF		LM							P	1	LM		78	L5		L1		L1		<.		4		
L									7																				L1				

KEY	F -L- G	FROM	TO	INT	RECOV RQD	MD % AGE	ROCK EV	TM RN	TM LC	TM QM1 QM2	TX TX	F S	C C	% O	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		177.21	178.92	1.71			LMSX	SF		LM							P	1	LM		78	L5			L1		L1			<.	4	
L								7																						L1			
/		178.92	179.86	0.94			LMSX	SF		LM							P	1	LM		78	L5			L1		L1			<.	4	
L								7																						L1			
/		179.86	181.02	1.16			LMSX	SF		LM							P	1	LM		78	L5			L1		L1			<.	4	
L								7																						L1			
/		179.86	180.03	0.17		6	MSSX	PY		BR	MX						R					⋆3			⋆=		R5				4	
L								4																						⋆)			
/	CON	181.02	183.03	2.01			SILT	SF		SI6	BD	LC	1	2	8	2	P	2	BD		72	L1			L1		L1				4	
L								3		CH2				8																L+			
/		183.03	185.03	2.00			SILT	SF		SI6	BD	LC	1	2	8	2	P	2	BD		72	L1			L1		L1				4	
L								3		CH2				8																L+			
/		185.03	186.53	1.50			SILT	SF		SI6	BD	LC	1	2	8	2	P	2	BD		72	L1			L1		L1				4	
L								3		CH2				8																L+			
/		186.53	188.06	1.53			SILT	SF		SI6	BD	LC	1	2	8	2	P	2	BD		72	L1			L1		L1				4	
L								3		CH2				8																L+			
/	CON	186.06	190.20	2.14			SILT	SF		SI2	LM	LC					P	1	LM		80	L4			L1		L2				4	
L								4		CH4				8																L=			
R		188.06	190.20		SULPHIDES ARE FOUND IN CHERT RICH LAMINATIONS, WHICH INTERBED																													
R		188.06	190.20		WITH SILTSTONE LAYERS. THESE CHERTY LAMINATED SULPHIDES ARE FROM																													
R		188.06	190.20		5-25 CM IN THICKNESS.																													
/	LSX	190.20	191.81	1.61			LMSX			CH8	LC						P	2	LM		30	L8			V+		V=				4	
L								7		SI=																				L=			
K	LM1	191.81	191.81	0.00																													
/	CON	191.81	197.96	6.15			SILT	CR			MX		2	2		2	P								<(		S1					
L								2						9																			
/		193.55	195.99	2.44		X	LOST										R																
L																																	
/		197.96	201.90	3.94			BRHT	CR								NR7	P										R1					
L								4						2		JN1																
/		201.90	202.60	0.70			SAND	CR		SN7	MX		0	3	7	3	P										D=					
L								4						8																			
R		201.90	202.60		CONVALUTED, CARBONACEOUS ARGILLITE INTERFINGERS THE SANDSTONE.																													
/		202.60	203.00	0.40			BRPM	CR								JK2	P								<⋆		D=					
L								2						3		JK1																

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R D D	MD % ROCK AGE	TM TM EV	QM1 TX RQ	TX TX LC	F C S	% M C	ARG O O	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		202.60	203.00																									

THE PEBBLY MUDSTONE HAS A SANDSTONE MATRIX.

A UMM				RQD	SP.GR.	
A TYP				CM	SG	
A MTH				B-B	WEIGH	
A LAB				FLD	FLD	
R ASY	0.00	0.00	RCOV=RECOVERY(C17-20) IS MEASURED IN CM BLOCK TO BLOCK(B-B)			
R ASY	0.00	0.00	RQD=ROCK QUALITY DESIGNATOR(C27-32)MEASURED IN CM BLOCK TO BLOCK			
R ASY	0.00	0.00	RQD IS THE TOTAL LENGTH (BETWEEN BLOCKS) OF PIECES OF CORE			
R ASY	0.00	0.00	AT LEAST 2-1/2 TIMES DIAMETER OF CORE TO NEAREST CM, DIVIDED			
R ASY	0.00	0.00	BY LENGTH OF INTERVAL = BLOCK(TO) MINUS BLOCK(FROM)TIMES 100			
R ASY	0.00	0.00	CM INDICATES THAT MEASUREMENTS ARE IN CM'S WHICH ARE TO BE RIGHT			
R ASY	0.00	0.00	JUSTIFIED AGAINST THE DOUBLE VERTICAL LINE AT RIGHT MARGIN			
R ASY	0.00	0.00	OF EACH FIELD.			
R ASY	0.00	0.00	B-B=BLOCK-TO-BLOCK (DRILLERS BLOCKS). ENTER METRAGE OF ONE BLOCK			
R ASY	0.00	0.00	AS THE TO OF ANY INTERVAL AND THE METRAGE OF THE NEXT BLOCK.			
R ASY	0.00	0.00	ADDITIONAL POINTS (FROM-TO'S) CAN BE ESTABLISHED BETWEEN			
R ASY	0.00	0.00	BLOCKS TO BRACKET SPECIFIC INTERVALS OF LOCALIZED POOR			
R ASY	0.00	0.00	RECOVERY. B-B IS ENTERED RIGHT JUSTIFIED IN EACH FIELD IN			
R ASY	0.00	0.00	THE AMTH HEADER.			
R ASY	0.00	0.00	THE FIRST INTERVAL, THROUGH THE OVERBURDEN, WITH ZERO RECOVERY,			
R ASY	0.00	0.00	SHOULD BE ENTERED FIRST -- SEE BELOW.			
A 100	8.84	10.36	114	22		
A 100	10.36	11.58	112	00		
A 100	11.58	12.80	117	60		
A 100	12.80	13.72	87	18		
A 100	13.72	16.76	290	139	2.62	
A 100	16.76	18.90	151	32		
A 100	18.90	21.64	267	44		
A 100	21.64	24.69	305	78		
A 100	24.69	28.04	301	116		
A 100	28.04	31.09	305	139		
A 100	31.09	31.70	54	00		
A 100	31.70	33.53	183	00		
A 100	33.53	33.83	30	00	2.54	
A 100	33.83	35.66	159	00		
A 100	35.66	36.88	116	00	2.73	
A 100	36.88	37.49	54	20		
A 100	37.49	40.54	305	99		
A 100	40.54	43.28	224	21		

				RQD	SP.GR.
A UNM				CM	SG
A TYP				B-B	WEIGH
A LAB				FLD	FLD
A 100	43.28	43.59	27	00	
A 100	43.59	46.63	268	67	
A 100	46.63	47.85	122	00	
A 100	47.85	49.38	110	30	
A 100	49.38	50.29	91	18	2.66
A 100	50.29	50.90	61	00	
A 100	50.90	53.04	184	44	
A 100	53.04	53.95	71	00	
A 100	53.95	54.56	49	00	
A 100	54.56	56.39	151	00	
A 100	56.39	58.22	94	00	
A 100	58.22	59.44	79	00	
A 100	59.44	60.66	97	00	
A 100	60.66	62.18	56	00	
A 100	62.18	63.09	72	00	
A 100	63.09	64.31	96	00	
A 100	64.31	65.53	75	00	
A 100	65.53	67.36	164	43	
A 100	67.36	69.19	181	36	
A 100	69.19	69.80	61	20	2.67
A 100	69.80	72.54	274	21	
A 100	72.54	75.29	258	80	2.63
A 100	75.29	78.03	258	00	
A 100	78.03	79.86	176	45	
A 100	79.86	82.60	268	134	
A 100	82.60	83.21	46	20	
A 100	83.21	85.04	173	00	2.87
A 100	85.04	86.87	183	19	
A 100	86.87	89.92	271	114	2.51
A 100	89.92	92.96	304	138	2.64
A 100	92.96	95.71	275	82	
A 100	95.71	99.06	326	207	
A 100	99.06	102.11	213	91	2.40
A 100	102.11	103.33	122	177	
A 100	103.33	106.38	289	250	
A 100	106.38	109.42	285	115	2.47
A 100	109.42	111.25	176	137	
A 100	111.25	113.69	222	112	2.69
A 100	113.69	115.82	213	88	
A 100	115.82	117.04	95	25	2.57
A 100	117.04	120.40	314	77	
A 100	120.40	122.53	185	28	2.66
A 100	122.53	124.97	244	00	
A 100	124.97	127.41	209	24	
A 100	127.41	128.93	124	00	
A 100	128.93	130.45	152	00	2.15
A 100	130.45	133.50	253	20	
A 100	133.50	134.42	92	44	2.66
A 100	134.42	136.25	171	66	2.75
A 100	136.25	137.46	121	00	
A 100	137.46	138.99	131	00	

				ROD	SP.GR.
A UMM				CM	SG
A TYP				B-R	WEIGH
A LAB				FLD	FLD
A 100	138.99	139.60	49	00	
A 100	139.60	140.82	104	00	
A 100	140.82	141.73	91	00	
A 100	141.73	144.48	257	08	2.69
A 100	144.48	145.69	121	33	
A 100	145.69	148.13	200	20	
A 100	148.13	150.88	275	124	
A 100	150.88	153.92	285	020	
A 100	153.92	155.45	136	000	
A 100	155.45	157.89	190	000	
A 100	157.89	160.91	254	045	
A 100	160.91	162.28	137	000	
A 100	162.28	163.98	101	000	2.39
A 100	163.98	167.03	107	000	2.84
A 100	167.03	168.87	94	000	2.54
A 100	168.87	170.48	42	000	3.20
A 100	170.48	172.76	206	000	2.66
A 100	172.76	175.87	130	000	3.37
A 100	175.87	177.21	132	000	2.80
A 100	177.21	178.92	138	000	1.70
A 100	178.92	181.02	141	000	
A 100	181.02	183.03	180	000	2.68
A 100	183.03	185.03	197	000	
A 100	185.03	186.53	150	000	
A 100	186.53	188.06	140	000	
A 100	188.06	190.20	160	000	2.74
A 100	190.20	191.81	156	000	3.08
A 100	191.81	197.96	272	000	2.84
A 100	197.96	200.25	229	145	
A 100	200.25	202.60	202	72	2.46
A 100	202.60	203.00	40	00	2.32

R SUM DRILL HOLE 81-72 WAS DRILLED FROM THE SAME SET UP AS DDH81-71.

R SUM THE INCLINATION WAS STEEPENED TO -75 DEGREES, AND THE AZIMUTH

R SUM MAINTAINED AT 18 DEGREES. THE MARKER UNITS C,B,A,AND O WERE USED

R SUM TO LOCATE THE POSITION OF THE DRILL HOLE IN RELATION TO THE ORE

R SUM ZONE. OTHER THAN MARKER BEDS, LITHOLOGIC CORRELATIONS BETWEEN

R SUM DDH81-71 AND DDH81-72 WERE ONLY FAIR.

R SUM AN UNKOWN BLUE MINERAL WAS FOUND ABOVE THE ORE ZONE IN

R SUM DDH81-72 WHICH APPEARS TO CORRESPOND TO A SIMILAR MINERAL FOUND

R SUM IN DDH81-75.SAMPLES WERE TAKEN FROM BOTH HOLE FOR IDENTIFICATION

R SUM PURPOSES.

R SUM THE LAMINATED SILTSTONE FOUND WITHIN DDH81-71 ORE ZONE WAS

R SUM ALSO PRESENT IN DDH81-72. THIS BED MAY PROVE TO BE A GOOD MARKER

R SUM HORIZON WITHIN THE MAIN ZONE.

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6B02

DRILLHOLE/TRAVERSE :81-DH073	COLLAR ELEVATION: 1236.10	AZIMUTH(DEG) : 20.00	GEOLOGGED BY : HDG +
TOTAL DEPTH/LENGTH : 24.99	NORTHING(- IF S): 7002474.00	VERTICAL ANGLE : -69.00	DATE (YY/MM/DD): 810628
CORE/HOLE DIAMETER : HQ	EASTING (- IF W): 436718.62	CO-ORD SYSTEM :	PROJECT NUMBER : J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	17.37	25.00	-65.00

R HED 81-DH073 WAS DIRECTED AT THE MAIN ZONE, HOWEVER EXTREME

R HED AZIMUTH DEVIATION FORCED THE ABANDONMENT OF THE HOLE.

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   F   - I N T E R V A L -    CORE  T- %      TYPI- QAL  TEX-  GRAIN       PGI   STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS SUMMARY
K  L (UNITS =    .  DEC.PLACE)RECOV-  M M ROCK FYING MIN TURES CHARACS                      H  H  H  H  H ANY H  H  H ANY  ALT ORE
E  A  (MT=METRIC FT=FOOTRIC)  ERY    O I      TM TM MAT TX TX F C % M ARG  /RI T ID STK DIP  A  A  A  A  A MIN A  A  A MIN - - - -
Y  G  F R O M - T O -  I N T (  . )  D X TYPE  1  2 QM1  1  2 F F C A          1    AZM  RT QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
- --- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                          ROCK   FM     RT    TM QM2 TX TX S C O O CHT      T ID STK DIP MG MU CL SD QS HA PR MT SL HA
E  L                          QUAL   AGE EN- Q LC- 3      3  4 O     /          2    AZM  RT H  H  H  H  H  H  H  H  H  H  1   1
Y  G                          DESIG      VIR   COL             R     C            STRUCTUR-2  A  A  A  A  A  A  A  A  A  A    2   2

/ OVB    0.00    3.35   3.35            OVER                                P
L

/ CON    3.35    8.50   5.15            BRPM       *S(                MP6   P                                  D)
L                                            2                2   *   KO=

/        7.55    7.60   0.05          X BRPM CR    *S(                MP6   R                                  D)
L                                            2                2   *   KO=

/        8.50   17.32   8.82            BRHM CR                N R 9         P                                  B)
L                                            3         4

/       17.32   24.99   7.67            ARSI CR    SN1 SC     1 3 1 3       P  2 BD      61                    L)
L                                            3     SI+        8
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A	UMM			RQD	SP.GR.
A	TYP			CM	SG
A	MTH			B-B	WEIGH
A	LAB			FLD	FLD
R	ASY	0.00	0.00	RCOV=RECOVERY(C17-20) IS MEASURED IN CM BLOCK TO BLOCK(B-B)	
R	ASY	0.00	0.00	RQD=ROCK QUALITY DESIGNATOR(C27-32)MEASURED IN CM BLOCK TO BLOCK	
R	ASY	0.00	0.00	RQD IS THE TOTAL LENGTH (BETWEEN BLOCKS) OF PIECES OF CORE	
R	ASY	0.00	0.00	AT LEAST 2-1/2 TIMES DIAMETER OF CORE TO NEAREST CM, DIVIDED	
R	ASY	0.00	0.00	BY LENGTH OF INTERVAL = BLOCK(TO) MINUS BLOCK(FROM)TIMES 100	
R	ASY	0.00	0.00	CM INDICATES THAT MEASUREMENTS ARE IN CM'S WHICH ARE TO BE RIGHT	
R	ASY	0.00	0.00	JUSTIFIED AGAINST THE DOUBLE VERTICAL LINE AT RIGHT MARGIN	
R	ASY	0.00	0.00	OF EACH FIELD.	
R	ASY	0.00	0.00	B-B=BLOCK-TO-BLOCK (DRILLERS BLOCKS). ENTER METRAGE OF ONE BLOCK	
R	ASY	0.00	0.00	AS THE TO OF ANY INTERVAL AND THE METRAGE OF THE NEXT BLOCK.	
R	ASY	0.00	0.00	ADDITIONAL POINTS (FROM-TO'S) CAN BE ESTABLISHED BETWEEN	
R	ASY	0.00	0.00	BLOCKS TO BRACKET SPECIFIC INTERVALS OF LOCALIZED POOR	
R	ASY	0.00	0.00	RECOVERY. B-B IS ENTERED RIGHT JUSTIFIED IN EACH FIELD IN	
R	ASY	0.00	0.00	THE AMTH HEADER.	
R	ASY	0.00	0.00	THE FIRST INTERVAL, THROUGH THE OVERBURDEN, WITH ZERO RECOVERY,	
R	ASY	0.00	0.00	SHOULD BE ENTERED FIRST -- SEE BELOW.	
A	100	0.00	2.73	0	0
R	ASY	0.00	2.73	OVERBURDEN	
A	100	2.73	3.35	61	0
A	100	3.35	3.96	54	0
A	100	3.96	5.49	134	0
A	100	5.49	6.40	59	55
A	100	6.40	8.23	173	94
A	100	8.23	12.50	305	170
A	100	12.50	14.33	183	156
A	100	14.33	17.37	304	222
A	100	17.37	20.42	305	105
A	100	20.42	22.25	173	53
A	100	22.25	24.99	207	144

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6802

DRILLHOLE/TRAVERSE :	81-DH074	COLLAR ELEVATION:	1236.10	AZIMUTH(DEG) :	18.00	GEOLOGGED BY :	HDG +
TOTAL DEPTH/LENGTH :	274.93	NORTHING(- IF S):	7002473.00	VERTICAL ANGLE :	-69.00	DATE (YY/MM/DD):	810628
CORE/HOLE DIAMETER :	HQ	EASTING (- IF W):	436718.37	CO-ORD SYSTEM :	UTM	PROJECT NUMBER :	J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	29.87	25.00	-63.50
2	44.50	25.00	-61.50
3	59.74	28.00	-60.00
4	74.98	30.00	-59.00
5	90.22	29.00	-59.00
6	105.46	30.00	-58.25
7	120.70	33.50	-58.00
8	135.94	32.00	-57.50
9	151.18	35.00	-56.50
10	166.42	35.00	-56.33
11	181.66	36.00	-56.00
12	196.90	38.00	-56.00
13	212.14	38.00	-54.50
14	227.38	39.50	-51.67
15	242.62	41.00	-51.00
16	257.86	39.50	-51.75
17	273.10	40.00	-51.75

R HED DRILL HOLE 81-DH074 WAS DIRECTED AT THE MAIN ORE ZONE, BENEATH

R HED 81-DH072. THE RESULTS FROM THIS INTERSECTION WOULD BE USED FOR

R HED GRADE AND TONNAGE CALCULATIONS, IN CONNECTION WITH THE MAIN

R HED ZONE.

R HED THE ORE INTERSECTION EXTENDED FROM 243.96 METRES TO 259.38

R HED METRES, WITH AVERAGE GRADES OF 10.45% ZN, 3.18% PB, 8.44% FE AND

R HED 0.05% BA. THE MAJORITY OF CU VALUES WERE BELOW DETECTION LIMITS,

R HED AND AG WAS LESS THAN 0.04% PER TON. THE CENTRE OF THE ORE ZONE

R HED INTERSECTION IS 721 METRES FROM THE ZERO BAELINE AT 1025 METRES

R HED ABOVE SEA LEVEL. BASED ON CORE TO BEDDING ANGLE MEASUREMENTS,

R HED THE TRUE THICKNESS OF THE INTERSECTION WAS ESTIMATED TO BE

R HED 10.0 METRES. CORE RECOVERY WAS CALCULATED AS BEING 69.6%.

R HED STRATIGRAPHIC CORRELATION WAS POSSIBLE WITH MARKER BEDS

R HED D, C, B, A AND O. THE ORE ZONE IS A SILICATE HOSTED, LAMINATED

R HED SULPHIDE WITH MINOR DEFORMATION AND BRECCIATION.

	F - I N T E R V A L -			CORE	T- %		TYPI-	QAL	TEX-		GRAIN				PGI	STRUCTUR-1	ALTERATION MINS					ORE-TYPE MINS				SUMMARY
K	L (UNITS = . DEC.PLACE)			RECOV-	M	M	ROCK	FYING	MIN	TURES	CHARACS						H	H	H	H	H	ANY	H	H	H	ANY	ALT	ORE
E	A (MT=METRIC FT=FOOTRIC)			ERY	O	I		TM	TM	MAT	TX	TX	F	C	%	M	ARG	/RI	T	ID	STK	DIP	A	A	A	A	A	MIN	A	A	A	A	MIN	- - - -
Y	G F R O M - T O -		I N T (.)	D	X	TYPE	1	2	QM1	1	2	F	F	C	A			1		AZM	RT	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A	1	A	2
*	--- ----.--	----.--	---.--	---.--	--	-	----	--	--	---	--	--	-	-	-	-	----	---	-	--	---	---	--	--	--	--	--	--	--	--	--	-	-	-	-
K	F			ROCK	FM		RT		TM	QM2	TX	TX	S	C	O	O	CHT		T	ID	STK	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA				
E	L			QUAL	AGE	EN-	Q	LC-	3		3	4	0			/			2		AZM	RT	H	H	H	H	H	H	H	H	H	H	1		1	
Y	G			DESIG		VIR		COL					R		C			STRUCTUR-2			A	A	A	A	A	A	A	A	A	A	2		2	
R	SVY	0.00	0.00	SPERRY-SUN MULTI-SHOT RESULTS.																															
/	OVB	0.00	3.66	3.66			OVER											P																	
/		3.66	8.23	4.57			BRPM		*S*				2		*		MP6	P													D)			
L								2					2		*		KO=																	
/		6.50	6.80	0.30		X	BRPM	CR	*S*				2		*		MP6	R													D)			
L								2					2		*		KO=																	
/		7.80	8.10	0.30		X	SAND		SNX	(C			3	3		3		R													D.			
L								7					9																					
/		8.23	20.24	12.01			BRHM	CR									NR9	P													B)			
L								3					4																					
/		20.24	51.96	31.72			ARSI	CR	SN1	XB	SC	1	3	1	3			P	2	BD		61								L)			
L								3	SI+				8																					
/		51.96	55.47	3.51			BRPM		CR								MQ4	P													B)			
L								3									LO2																	
/		55.47	57.62	2.15			BRHT		SN1	G;							NQ3	P													D)			
L								4	*C=	B*	F*	4					MN4																	
R		55.47	57.62	THERE IS ONE NORMAL GRADED CYCLE OF CHERT WHICH INDICATES THAT																															
R		55.47	57.62	STRATIGRAPHIC TOPS ARE UPHOLE. SAND MAKES UP MOST OF THE MATRIX																															
R		55.47	57.62	BETWEEN CHERT CLASTS.																															
/		57.62	59.93	2.31			CGCP		*C1	F*							NP1	P													D)			
L								8		B*		7			C	LN6																			
R		57.62	59.93	THE LARGER CHERT FRAGMENTS ARE WELL ROUNDED WHEREAS THE SMALL																															
R		57.62	59.93	CHERT CLASTS ARE MORE ANGULAR.																															
K	M/D	57.62	57.62	0.00																															
/		57.62	58.29	0.67			9 SAND		SN9	G;	BD	2	3	9	6			R		BD		U45								D)			
L								8					8																					

K E Y	F -L- G	FROM	- TO -	INT	RECOV RQD	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX	TX	F S	C C	% O O	M O	ARG CHT	RI	1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		59.93	67.29	7.36			BRHT		4	*S* G; *C+ F*		2		*			NS4 LP2	P			F0		U55									C)		
L																																		
R		59.93	67.29		THE CLASTS ARE SURROUNDED BY A MUDDY MATRIX.																															
/		67.29	82.06	14.77			BRPM	CR	3	*S+		2		+			MQ4 JM=	P														B)		
L																																		
/		82.06	86.91	4.85			BRHM	CR	3	*S= SS		3		=			NP9	P														L+		
L																																		
R		82.06	86.91		THE PYRITE OCCURS WITHIN THE SANDSTONE LAMINATIONS OF THE																															
R		82.06	86.91		BRECCIATED ARSI FRAGMENTS.																															
/		86.91	88.53	1.62			BRPM		6	*S= (L		7	3	+	6	3	8 LO= LOB	P														D)		
L																																		
R		86.91	88.53		CHERT BRECCIA FRAGMENTS ARE SUPPORTED BY A SANDSTONE MATRIX.																															
/		88.53	90.61	2.08			BRHT		3			2					LQ8 LO1	P														D)		
L																																		
/		90.61	95.30	4.69			BRHT		4	*S=		3	+	=			MR4 LO2	P													<*	B)		
L																																		
/		90.61	91.21	0.60		8	BRPM		6	SN8		7					LN1 JM3	R														D+		
L																																		
R		90.61	91.21		THE MATRIX IS SANDSTONE SUPPORTED.																															
/		92.01	92.37	0.36		9	BRPM		6	SN8		8					LN= JM2	R														D+		
L																																		
R		92.01	92.37		THE MATRIX IS SANDSTONE SUPPORTED.																															
/		95.30	101.33	6.03			BRPM		6	SN6 G; *S)		7	*	)	C		MP1 LO3	P			F0		U50 V)									D+		
L																																		
R		95.30	101.33		THE MATRIX IS SANDSTONE SUPPORTED.																															
/		101.33	108.22	6.89			BRHT		3			2	*				MQ6 LO2	P												V+		R)		
L																																		
R		101.33	108.22		THE PYRITE OCCURS PREDOMINANTLY IN QUARTZ VEINS AND CHERT CLASTS																															
R		101.33	108.22		THE QUARTZ VEINS CUT ACROSS THE ARSI FRAGMENTS AND THE MUDSTONE																															
R		101.33	108.22		MATRIX.																															
/		108.22	109.87	1.65			BRPM		6	SN6 G; *C+ F* B*	6				0		KL= KN3	P												V+	<.	D)		
L																																		
R		108.22	109.87		CHERT BRECCIA FRAGMENTS ARE SUPPORTED BY A SANDSTONE MATRIX.																															
/		109.87	112.95	3.08			BRHT		4			2					MP7 KN1	P												V+		R+		
L																																		
/	FLT	111.86	112.43	0.57		X	BRHT	CR	4	GG2		2					MP7 KN1	R						<+ >=		B+				C+		B. B(		
L																																		
R		111.86	112.43		THE AREA OF FAULTING IS CHARACTERIZED BY SULPHIDE MINERALIZATION																															

K F Y	F -L- G	FROM ----.--	- TO ----.--	INT ---.--	RECOV ---.--	MD RQD	% AGE	ROCK EV	TM RU	TM LC	GM1 TM	TX GM2	TX TX	F S	C C	% O	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		111.66	112.43					AND BRECCIATION OF THE BRHT UNIT.																												
/	FLT	112.95	118.86	5.91				ARGL	CR		SN)	SS	LM	1	3	)	3		P	1										L+					
L									3		GG1			9														<)								
R		112.95	118.86					SANDSTONE LAMINATIONS WITHIN THE ARGL INCREASE GOING DOWN.																													
R		112.95	118.86					THE UNIT IS HIGHLY BROKEN UP DUE TO FAULTING.																													
/		118.86	127.84	8.98				CGCP			SN3	G;						LR2	P					<)					B)						
L									6					5		C	K04																		
K	M/C	118.86	118.86	0.00																																
/		118.86	120.32	1.46			8	SAND			SN5	G;	BD	2	3	8	5		R	2	BD		U52	V+					D)					
L									6		GG1			7																					
/	FLT	121.30	122.30	1.00			X	CGCP			GG4	G;	F*					LR2	R					<1					B+						
L									6		*C+	8*		5		C	K04										<+			D)					
/		127.50	127.84	0.34			9	SAND			SN9	BD		1	3	9	5		R	2	BD		50						D)					
L									6					8																					
/		127.84	135.42	7.58				BRHT	CR		*C+	F0	CC					LO6	P		F0		55						B)					
L									4			F*		3				K02																	
R		127.84	135.42					THE ARGILLITE AND CHERT CLASTS ARE SURROUNDED BY A MUDDY MATRIX.																													
/		128.55	128.96	0.41			9	SAND			SN8			1	3	8	5		R											D)					
L									6					8																					
/		134.41	135.42	1.01			8	CGBR			SN2							MP2	R											B)					
L									6		*C3	F*		6		C	KN6																	
/		135.42	142.52	7.10				BRHT			*S*	ND						MR7	P											*)					
L									3					2	*		KN1																	
/	FLT	137.10	137.42	0.32			X	BRHT			GG7	ND						MR7	R											D)					
L									3					2	*		KN1																	
K	M/C	142.52	142.52	0.00																																
/		142.52	144.35	1.83				SAND	CR		GG3	BD		1	3	8	5		P	2										D)					
L									8					7																					
/		144.35	154.20	9.85				BRHT	CR		*C+		F*					LR8	P											L)					
L									3			B*		2				KO1																	
R		144.35	154.20					PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT CLASTS, AND AS																													
R		144.35	154.20					LAMINATIONS WITHIN ARSI FRAGMENTS.																													
/		151.49	151.67	0.18			9	CGBR			SN2	BD	G;					KL1	R	3	BD		U60						R+					
L											GG+			)	7			KN6																	
R		151.49	151.67					THE CORE IS HIGHLY SHEARED AND CARBONACEOUS INDICATING THE																													
R		151.49	151.67					POSSIBILITY OF FAULTING.																													

K E Y	F -L- G	FROM ----.--	TO ----.--	INT ---.--	RECOV MD % ROCK TM TM QM1 TX TX F C % M ARG RQD AGE EV RQ LC TM QM2 TX TX S C O O CHT	RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY A 1 A 2 2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA
/	FLT	154.20	156.06	1.86	CGBR CR GG= F* 4 LN1	P R+
L					4 *C1 B* KN3	
/		154.20	154.30	0.10	8 BRPM CR *C= KN=	R R+
L					2 F* JM2	
K	M/A	156.06	156.06	0.00		
/		156.06	157.58	1.52	SAND XB 1 3 9 3	P B+
L					6 8	
/		156.06	156.62	0.56	3 ARSI CR SN3 BD SS 1 3 3 3	R 2 BD 32 D)
L					4 8	
/		156.62	157.00	0.38	7 BRPM *C(LO1	R B+
L					4 F* 3 KN2	
R		156.62	157.00		THE MATRIX IS SANDSTONE IN THIS INTERVAL.	
/		157.58	170.08	12.50	BRHT CR *S4 KS6	P R+
L					4 *C) F* B* 2 + + KO2	
R		157.58	170.08		PYRITE IS CONFINED TO CHERT FRAGMENTS AS A REPLACEMENT MINERAL.	
/	FLT	156.42	159.01	0.59	X BRHT GR *S4 KS6	R D)
L						
/		168.12	170.08	1.96	7 BRHM CR GG7 LN9	R V2 D+
L					3)	
/		170.08	172.00	1.92	SILT CR LM 2 3 2 4	P 1 52 L+
L					2 8	
/		170.08	170.83	0.75	8 SAND BD 2 3 8 4	R 2 V1 D1
L					5 8	
/		171.62	172.00	0.38	X SILT PY LM 2 3 2 4	R 1 52 L3
L					2 8	
/		172.00	173.95	1.95	ARSI CR SI= LM (L 1 2 = 2	P 1 <* D+
L					2 SN+ 8	
/		172.00	173.95	1.95	1 BRPM KM1	R 3 <* D=
L					3 2 JM2	
R		172.00	173.95		INTERBEDDED BRPM INTERVALS ARE FROM .3 - 3 CM THICK.	
/		173.95	176.32	2.37	BRPM *C+ F* LM1	P R+
L					2 B* R* 2 JM2	
/		176.32	179.75	3.43	BRHT *S+ G; LR3	P <. R+
L					4 2 + JM3	
R		176.32	179.75		PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT CLASTS.	

K E Y	F -L-	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	TM QM1 QM2	TX	TX	F S	C	% O	M O	ARG CHT	RI	1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY	CP	GL MT	YY SL	A 1 HA	A 2
/		179.05	179.55	0.50			7 SAND			G;	BD		2	3	7	4		R	2		U52								D+					
L									5						7																			
/		179.75	181.66	1.91			ARGL	CR					1	3	=	4		P			53								L+					
L									1						9																			
/		179.75	181.66	1.91			2 BRPM	CR									LO3	R											R)					
L									1					2			JK+																	
/		181.66	185.33	3.67			BRHT			G;					2		MR7	P											R+					
L									3						2		KO2																	
/		185.33	186.65	1.32			SAND			BD	G;		2	3	7	5		P	2		U45								D=					
L									6						7																			
R		185.33	186.65				EUHEDRAL PYRITE CRYSTALS ARE PREVALENT THROUGHOUT THE SANDSTONE																															
R		185.33	186.65				INTERVAL INDICATING EPIGENETIC DEPOSITION.																															
/		186.65	198.12	11.47			BRHT			*C+	I*						MV8	P											R+					
L									4		B*		1				L01																	
R		186.65	198.12				LARGE ARSN FRAGMENTS CONTAIN PYRITE LAMINATIONS WITHIN SANDSTONE																															
R		186.65	198.12				LAYERS.																													
/		198.12	201.82	3.70			ARGL	CR		GG1			1	1		1		P											<)					
L									1						9																			
/		199.15	199.40	0.25		X	ARGL	CR		GG2			1	1		1		R											#7					
L									1						9																			
/		201.17	201.82	0.65		2	BRHT			*C+							JM2	R											*2					
L									5		F*	B*	5				JM3																	
/		201.82	206.65	4.83			BRHT			*S*							LR3	P											**					
L									5		*C)	F*		3		*	KO4																	
R		201.82	206.65				PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT FRAGMENTS.																															
/		206.65	230.03	23.38			ARGL	CR					1	3	+	4		P	0		41								L+					
L									1			LM	9																					
R		206.65	230.03				THE ARGL IS FAINTLY LAMINATED, WITH MOST LAMINATIONS PARTIALLY																															
R		206.65	230.03				REPLACED BY PYRITE. MILD BRECCIATION OF THE ARGL OCCURS IN TWO																															
R		206.65	230.03				10 CM SECTIONS, IN WHICH PYRITIZATION APPEARS TO BE STRONGEST																															
/		218.24	218.57	0.33		8	SAND	PY			XB	BD	1	3	7	3		R	1	BD	45								D2					
L									5						8																			
/		221.80	222.00	0.20		5	SILT	BD	PY	SIS	G;	BD	1	3	4	3		R		BD	50								L1					
L									3		SN4				8																			
/		226.50	227.21	0.71		9	BRHT			*G)	G;						KP4	R											D=					
L									4			F*		3			KO2																	
/	FLT	230.03	231.60	1.57			ARGL	CR	LM	GG3			1	3	)	3		P	1	LM	55		<+		<)				#=					
L									1						9																			

```
K  F  F R O M - T O -  I N T RECOV  MD % ROCK TM TM QM1 TX TX F C % M ARG   RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
E -L- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
Y  G                         R Q D  AGE EV RQ LC TM QM2 TX TX S C O O CHT      2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA

/       230.52  230.98   0.46          9 BRHM                          MP9   R                                   D+
L                                          4                3       KL=

K M/O   231.60  231.60   0.00

/       231.60  233.02   1.42            SAND       SN6 G; BD 1 3 6 6       P  3 BD     U60                     L=
L                                          4     SI2

/       233.02  240.32   7.30            ARSI       SI1                     P  1         42                     B+
L                                          4     SN=

/       240.32  241.71   1.39            ARGL CR    SI+ LM    0 2 + 2       P  1 LM      32              <)     L+          8
L                                          3               9

/       241.71  243.96   2.25            SILT       SI8 LM    1 3 = 3       P  1 LM      35              <+     L+          8
L                                          3     SN=       8

K UM1   243.96  243.96   0.00

/ MSX   243.96  245.63   1.67            MSSX    SF     BR             KM3   P                <=            X1     #3     B+     8
L                                          4                                                                          Q=

/ LSX   245.63  247.19   1.56            LMSX SF SX     LM             JK=   P  1             L5            L1     L2     L+     8
L                                          5         VG BR                                                            L1
R       245.63  247.19      THE SILICA IS HIGHLY WEATHERED AND UNCONSOLIDATED.

/ LSX   247.19  247.90   0.71            LMSX SF SX     LM LC               P  1 LM      30 L5            L1     L2     L=     8
L                                          8R                                                                         L2

/ FSX   247.90  248.66   0.76            FGSX SF CR     LC                  P                L5            L=     L1     B=     8
L                                          3                                                                          L1
R       247.90  248.66      THIS UNIT CONSISTS OF DISCONTINUOUS LAMINATIONS OF SULPHIDE AND
R       247.90  248.66      SULPHATE WHICH HAVE BEEN FRAGMENTED.

/ LSX   248.66  250.93   2.27            LMSX SF        LC LM               P  1 LM      37 L6            L1     #2     L+     8
L                                          8T            BR                                                           L2

/ LSX   250.93  252.55   1.62            LMSX SF        LM                  P  1         65 L5            L=     B1     L+     8
L                                          8T                                                                         L2
R       250.93  252.55      ARGILLITE BEDS(0.7CMS)OCCUPY 10-15% OF THE TOTAL UNIT VOLUME.

/       252.55  252.98   0.43            SAND SF        MX             33 3  P                M9            C+     D=          8
L                                          8               8
R       252.55  252.98      THIS UNIT DOES NOT APPEAR TO BE A TRUE SANDSTONE. THE SAND SIZED
R       252.55  252.98      ANGULAR FRAGMENTS ARE CLEAR QUARTZ WHICH SUGGESTS SILICIFICATION
R       252.55  252.98      HAS OCCURRED.

/       252.98  254.51   1.53            LOST                               P

/ LSX   254.51  255.84   1.33            LMSX SF        LM LC               P  1 LM      58 L3            L1     #3     L+     8
L                                          7         BR                                                                 L1
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K F F R O M - T O - INT RECOV	MD % ROCK TM TM QM1 TX TX F C % M ARG	RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY	A 1 A 2
E -L- -----.-- ----.-- ---.-- ---.--	-- - ---- -- -- --- -- -- - - - - ----	--- - -- --- --- -- -- -- -- -- -- -- -- --	- - - -
Y G R Q D	AGE EV RQ LC TM QM2 TX TX S C O O CHT	2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA	
R 254.51 255.84	THIS HIGHLY CONVOLUTED,MILDLY BRECCIATED LMSX CONTAINS ARGILLITE		
R 254.51 255.84	FRAGMENTS THAT MAY HAVE ORIGINALLY BEEN BEDDED AND LATER		
R 254.51 255.84	DISRUPTED.		
/ LSX 255.84 257.76 1.92	LMSX SF BA LM //	P 1 LM 40 L5 L2 L1 L+	8
L	8 LC SS	L2	
R 255.84 257.76	ARGILLITE BEDS ARE 5% OF THE TOTAL VOLUME.		
/ LSX 257.76 259.38 1.62	LMSX SF PY LM LC	P L3 L2 B2	8
L	4	L1	
/ 259.38 260.60 1.22	LOST	P	
K LM1 259.96 259.96 0.00			
/ 260.60 261.73 1.13	SILT LM 0 1 8 1	P 1 LM 50 V= <) L=	
L	3 8	L=	
/ 261.73 264.87 3.14	SILT LM 0 1 8 1	P 1 LM 60 V) <+ L+	
L	3 8		
/ 264.87 267.50 2.63	SILT LC LM 0 1 8 1	P 1 LM 50 L1 <) L=	
L	4 8		
R 264.87 267.50	THE SULPHIDE AND QUARTZ LAMINATIONS OCCUR IN DESCRETE 3-5 CM		
R 264.87 267.50	PACKAGES. THE SILTSTONE AND THE LAMINATIONS ARE CONVOLUTED AND		
R 264.87 267.50	MILDLY BRECCIATED.		
/ CON 267.50 274.93 7.43	ARGL CR GR SI= LC BN 02=2 P LM 60 V= E=		
L	2 PY 9		
R 267.50 274.93	THIS UNIT IS A CARBONACEOUS ARGL IN WHICH CONVOLUTED INTERVALS		
R 267.50 274.93	OF MORE SILICIFIED ARGILLITE ARE BORDERED BY PYRITIC ENVELOPES.		
R 267.50 274.93	THESE UNITS ARE LATER CROSSCUT BY SILICIOUS VEINS AND VEINLETS.		
R 267.50 274.93	OPEN SPACE FILLING BY QUARTZ AND PYRITE IS ALSO PRESENT. THE		
R 267.50 274.93	DISRUPTION OF BEDDING SEEMS TO BE ASSOCIATED WITH THE INTRODUCT-		
R 267.50 274.93	ION OF PYRITE AND SILICIFICATION OF THE ARGL.		

A UMM				RQD	SP.GR.	
A TYP				CM	SG	
A MTH				B-B	WEIGH	
A LAB				FLD	FLD	
R ASY	0.00	0.00	RCOV=RECOVERY(C17-20) IS MEASURED IN CM BLOCK TO BLOCK(B-B)			
R ASY	0.00	0.00	RQD=ROCK QUALITY DESIGNATOR(C27-32)MEASURED IN CM BLOCK TO BLOCK			
R ASY	0.00	0.00	RQD IS THE TOTAL LENGTH (BETWEEN BLOCKS) OF PIECES OF CORE			
R ASY	0.00	0.00	AT LEAST 2-1/2 TIMES DIAMETER OF CORE TO NEAREST CM, DIVIDED			
R ASY	0.00	0.00	BY LENGTH OF INTERVAL = BLOCK(TO) MINUS BLOCK(FROM)TIMES 100			
R ASY	0.00	0.00	CM INDICATES THAT MEASUREMENTS ARE IN CM'S WHICH ARE TO BE RIGHT			
R ASY	0.00	0.00	JUSTIFIED AGAINST THE DOUBLE VERTICAL LINE AT RIGHT MARGIN			
R ASY	0.00	0.00	OF EACH FIELD.			
R ASY	0.00	0.00	B-B=BLOCK-TO-BLOCK (DRILLERS BLOCKS). ENTER METRAGE OF ONE BLOCK			
R ASY	0.00	0.00	AS THE TO OF ANY INTERVAL AND THE METRAGE OF THE NEXT BLOCK.			
R ASY	0.00	0.00	ADDITIONAL POINTS (FROM-TO'S) CAN BE ESTABLISHED BETWEEN			
R ASY	0.00	0.00	BLOCKS TO BRACKET SPECIFIC INTERVALS OF LOCALIZED POOR			
R ASY	0.00	0.00	RECOVERY. B-B IS ENTERED RIGHT JUSTIFIED IN EACH FIELD IN			
R ASY	0.00	0.00	THE AMTH HEADER.			
R ASY	0.00	0.00	THE FIRST INTERVAL, THROUGH THE OVERBURDEN, WITH ZERO RECOVERY,			
R ASY	0.00	0.00	SHOULD BE ENTERED FIRST -- SEE BELOW.			
A 100	0.00	3.66	000	000		
R ASY	0.00	3.66	OVERBURDEN			
A 100	3.66	5.81	187	46	2.70	
A 100	5.81	8.23	242	107		
A 100	8.23	11.28	305	172		
A 100	11.28	14.33	303	162		
A 100	14.33	14.94	61	45		
A 100	14.94	17.98	304	291		
A 100	17.98	21.34	230	173		
A 100	21.34	24.69	335	172	2.70	
A 100	24.69	28.04	335	194		
A 100	28.04	28.65	61	75		
A 100	28.65	30.18	137	69		
A 100	30.18	33.22	304	114		
A 100	33.22	34.75	152	63		
A 100	34.75	35.66	81	20		
A 100	35.66	38.17	251	99	2.65	
A 100	38.17	41.76	303	51		

A UMM				RQD	SP.GR.
A TYP				CM	SG
A MTH				B-B	WEIGH
A LAB				FLD	FLD
A 100	41.76	44.81	201	122	
A 100	44.81	47.85	304	89	2.73
A 100	47.85	49.83	124	69	
A 100	49.83	52.43	260	84	
A 100	52.43	55.47	255	77	
A 100	55.47	58.83	295	232	2.76
A 100	58.83	62.18	313	305	
A 100	62.18	65.52	309	283	2.70
A 100	65.52	68.58	290	195	
A 100	68.58	71.32	256	225	
A 100	71.32	72.24	92	92	
A 100	72.24	75.29	277	231	2.67
A 100	75.29	78.33	283	256	
A 100	78.33	81.38	274	208	2.66
A 100	81.38	84.48	288	236	2.68
A 100	84.48	86.56	161	70	
A 100	86.56	89.61	255	209	2.66
A 100	89.61	92.96	282	155	2.70
A 100	92.96	96.32	217	18	
A 100	96.32	97.54	81	18	
A 100	97.54	99.67	131	87	
A 100	99.67	101.80	126	29	
A 100	101.80	102.72	77	39	2.74
A 100	102.72	103.94	122	83	2.66
A 100	103.94	107.29	281	163	
A 100	107.29	110.34	229	115	2.51
A 100	110.34	111.86	152	16	
A 100	111.86	114.91	191	46	2.72
A 100	114.91	117.96	138	00	2.73
A 100	117.96	121.01	158	21	
A 100	121.01	124.05	57	17	
A 100	124.05	126.80	119	88	2.67
A 100	126.80	128.32	152	66	2.65
A 100	128.32	130.15	110	33	
A 100	130.15	132.28	152	48	
A 100	132.28	133.20	73	46	
A 100	133.20	136.25	241	137	2.67
A 100	136.25	139.29	204	93	2.69
A 100	139.29	142.34	198	76	2.66
A 100	142.34	145.39	254	71	2.69
A 100	145.39	146.61	86	17	
A 100	146.61	149.35	193	48	
A 100	149.35	150.57	89	00	
A 100	150.57	151.49	74	00	
A 100	151.49	152.70	88	39	
A 100	152.70	156.06	281	53	2.70
A 100	156.06	157.58	99	36	2.66
A 100	157.58	159.41	132	00	
A 100	159.41	160.63	119	00	2.69
A 100	160.63	162.15	116	00	
A 100	162.15	163.68	83	00	

A UMM				RQD	SP.GR.
A TYP				CM	SG
A MTH				B-B	WEIGH
A LAB				FLD	FLD
A 100	163.68	164.29	41	00	
A 100	164.29	166.73	139	34	
A 100	166.73	168.86	146	28	
A 100	168.86	170.08	62	00	
A 100	170.08	171.30	73	17	2.54
A 100	171.30	172.52	116	31	2.63
A 100	172.52	173.74	89	18	
A 100	173.74	176.78	153	48	
A 100	176.78	177.70	69	00	
A 100	177.70	178.92	21	00	2.71
A 100	178.92	179.53	11	00	
A 100	179.53	180.14	54	17	
A 100	180.14	181.66	112	00	
A 100	181.66	183.18	144	41	
A 100	183.18	184.71	121	76	
A 100	184.71	186.23	114	31	2.41
A 100	186.23	187.76	114	57	
A 100	187.76	189.28	104	47	
A 100	189.28	190.20	59	00	
A 100	190.20	191.41	94	00	
A 100	191.41	192.33	63	18	
A 100	192.33	193.85	108	74	
A 100	193.85	194.77	66	39	
A 100	194.77	195.38	43	21	
A 100	195.38	196.90	98	19	
A 100	196.90	198.42	104	24	
A 100	198.42	199.03	61	00	
A 100	199.03	199.95	39	00	
A 100	199.95	201.17	53	00	
A 100	201.17	202.69	114	00	
A 100	202.69	203.91	74	00	
A 100	203.91	205.44	108	44	2.64
A 100	205.44	206.65	94	51	
A 100	206.65	207.57	44	00	
A 100	207.57	208.48	52	00	
A 100	208.48	209.70	51	00	
A 100	209.70	210.62	38	00	
A 100	210.62	212.14	67	19	
A 100	212.14	213.36	84	43	
A 100	213.36	214.58	88	19	
A 100	214.58	216.10	99	00	
A 100	216.10	217.63	112	36	
A 100	217.63	219.15	121	25	2.64
A 100	219.15	220.68	89	24	
A 100	220.68	222.20	119	21	
A 100	222.20	223.11	84	00	
A 100	223.11	224.33	37	00	
A 100	224.33	225.25	81	13	
A 100	225.25	225.55	30	11	
A 100	225.55	226.77	77	00	
A 100	226.77	227.99	95	28	

				ROD	SP.GR.
A UMM				CM	SG
A TYP				B-B	WEIGH
A MTH				FLD	FLD
A LAB					
A 100	227.99	229.51	118	21	
A 100	229.51	230.43	54	00	
A 100	230.43	231.34	61	14	
A 100	231.34	232.87	141	51	
A 100	232.87	234.39	86	00	
A 100	234.39	235.92	112	24	
A 100	235.92	237.44	125	00	
A 100	237.44	238.96	120	22	
A 100	238.96	240.32	118	15	2.47
A 100	240.32	241.71	132	00	
A 100	241.71	243.96	225	00	
A 100	243.96	245.63	157	00	
A 100	245.63	247.19	145	00	
A 100	247.19	247.90	70	00	
A 100	247.90	248.66	74	00	
A 100	248.66	250.93	151	00	
A 100	250.93	252.55	152	00	
A 100	252.55	252.98	40	00	
A 100	252.98	254.51	00	00	
A 100	254.51	255.84	69	00	
A 100	255.84	257.76	158	00	
A 100	257.76	259.38	57	00	
A 100	259.38	260.60	00	00	
A 100	260.60	261.73	113	00	
A 100	261.73	264.87	220	00	
A 100	264.87	266.09	89	00	2.90
A 100	266.09	267.00	68	00	
A 100	267.00	268.83	169	00	
A 100	268.83	269.75	59	00	
A 100	269.75	272.19	155	43	
A 100	272.19	273.71	73	00	
A 100	273.71	274.02	20	00	
A 100	274.02	274.50	29	00	
A 100	274.50	274.93	38	00	

R SUM NORMAL GRADING OF SANDSTONE AND CHERT PARTICLES INDICATES THAT
R SUM TOPS ARE IN AN UPHOLE DIRECTION (I.E. SOUTH). MARKER BEDS D,C,B,
R SUM A AND O WERE USED TO CORRELATE THE STRATIGRAPHIC POSITION OF
R SUM THE DRILL HOLE.
R SUM THE SPHALERITE WITHIN THE ORE HORIZON IS COLOURED LIGHT PINK,
R SUM CANARY YELLOW AND WHITE, MAKING GRADE ESTIMATES DIFFICULT. THE
R SUM MARCASITE AND PYRITE RICH AREAS, SULPHIDE BRECCIATION AND DEFOR-
R SUM MATION APPEAR TO RESULT FROM SOFT SEDIMENT SLUMP RELATING TO
R SUM MOVEMENT ASSOCIATED WITH HYDROTHERMAL ACTIVITY.

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6B02

DRILLHOLE/TRAVERSE :81-DH075	COLLAR ELEVATION: 1235.54	AZIMUTH(DEG) : 18.00	GEOLOGGED BY : +
TOTAL DEPTH/LENGTH : 553.83	NORTHING(- IF S): 7002472.00	VERTICAL ANGLE : -82.50	DATE (YY/MM/DD): 0
CORE/HOLE DIAMETER : HQNQ	EASTING (- IF W): 436719.50	CO-ORD SYSTEM :	PROJECT NUMBER : J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	11.89	18.00	-82.75
2	26.21	20.00	-82.75
3	44.50	29.50	-83.25
4	60.66	34.00	-82.75
5	73.15	41.00	-82.25
6	93.27	56.00	-78.75
7	107.59	60.00	-76.00
8	123.14	61.00	-75.00
9	137.16	62.50	-73.00
10	153.62	63.50	-70.75
11	168.86	64.00	-70.00
12	184.10	64.00	-68.67
13	198.12	65.00	-68.00
14	213.36	62.00	-67.50
15	228.60	64.00	-67.75
16	243.50	63.00	-67.75
17	259.08	62.00	-67.00
18	277.37	63.00	-66.67
19	333.76	64.50	-65.67
20	365.76	63.00	-65.25
21	396.24	66.00	-63.75
22	426.72	64.00	-63.00
23	457.81	64.00	-63.00

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   F   - I N T E R V A L -    CORE  T- %      TYPI- QAL  TEX-  GRAIN       PGI   STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS SUMMARY
K  L (UNITS =    .  DEC.PLACE)RECOV-  M M ROCK FYING MIN TURES CHARACS                      H  H  H  H  H ANY H  H  H ANY  ALT ORE
E  A  (MT=METRIC FT=FOOTRIC)  ERY    O I      TM TM MAT TX TX F C % M ARG  /RI T ID STK DIP  A  A  A  A  A MIN A  A  A MIN - - - -
Y  G  F R O M - T O -  I N T ( . )  D X TYPE  1  2 QM1  1  2 F F C A          1    AZM  RT QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
- --- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                          ROCK   FM     RT    TM QM2 TX TX S C O O CHT      T ID STK DIP MG MU CL SD QS HA PR MT SL HA
E  L                          QUAL   AGE EN- Q LC- 3      3  4 O     /          2    AZM  RT H  H  H  H  H  H  H  H  H  H   1   1
Y  G                          DESIG      VIR   COL            R     C            STRUCTUR-2  A  A  A  A  A  A  A  A  A  A    2   2

R SVY    0.00    0.00      SINGLE SHOT RESULTS FROM SPERRY-SUN DIP NOT TURN OUT FOR
R SVY    0.00    0.00      DEPTHS 495.60M., 519.99 M, 544.37 M, AND 550.47 M.

/ OVB    0.00    4.45   4.45            OVER                                P
L

/        4.45   19.04  14.59            BRPM       *S( CC            LR6   P                                R)
L                                          4      *C) B* F* 2 ) )   JO=
R        4.45   19.04      PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT CLASTS.
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K E Y	F -L-	F R O M -	T O -	I N T	RECOV R W D	MD % AGE	ROCK EV	TM RQ	TM LC	TM DM1 DM2	TX TX	TX TX	F S	C C	% O O	M CHT	ARG	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		4.45	19.04		IT ALSO FORMS ALONGATE CONCRETIONS OR NODULES.																												
/		19.04	89.61	70.57			BRHM				SS	ND					MR9	P										B9				
L									4																							
R		19.04	89.61		PYRITE IS PRESENT IN THE SAND LAYERS OF SILTBANDED ARGILLITE																												
R		19.04	89.61		FRAGMENTS.																												
/		89.61	91.13	1.52			BRHT				*C)						LO7	P										R+				
L									3		F*	R*	3				JN1															
R		89.61	91.13		PYRITE OCCURS AS A REPLACEMENT MINERAL WITHIN CHERT FRAGEMENTS.																												
R		89.61	91.13		CRYSTALS ARE EUHEDRAL TO SUBHEDRAL.																												
/		91.13	101.03	9.90			BRHM	CR			SS						LR9	P	7									B(				
L									3				3																			
/		95.93	96.84	0.91		3	BRPM				*C(						LO7	R	6									R)				
L									3			F*	2				JN1												R(			
R		95.93	96.84		SPHALERITE AND PYRITE BOTH APPEAR AS REPLACEMENT MINERAL IN																												
R		95.93	96.84		CHERT FRAGMENTS.																												
/		97.26	101.03	3.77		9	BRHM	CR			*S(	SS					KQ9	R										R)				
L									3				2	(			JK)															
R		97.26	101.03		PYRITE ALMOST COMPLETELY REPLACES MOST CHERT FRAGMENTS AND																												
R		97.26	101.03		SANDSTONE LAMINATIONS WITHIN ARGILLITE FRAGMENTS.																												
/		101.03	108.52	7.49			BRHT	CR			*S*	G;					LQ4	P										R)				
L									5		*C+	B*	F*	4	*		KP3															
R		101.03	108.52		THE CHERT FRAGMENTS GRADE NORMALLY UPWARDS THE MATRIX CHANGES																												
R		101.03	108.52		CHANGES FROM SAND SIZED PARTICLES TO CLAY SIZED.																												
K	M/D	108.52	108.52	0.00																												
/		108.52	113.42	4.90			SAND				*C3	G;	BD	1	3	8	5	P	2			U62	V+		#*		B)				
L									7			B*	F*	8														V(				
R		108.52	113.42		PYRRHOTITE IS FOUND INFREQUENTLY IN QUARTZ VEINS.																												
/		110.53	112.72	2.19		9	CGCP				*C+	G;					LR3	R					V)		#*		B)					
L									6			F*	B*	5			KN6															
/		113.42	116.95	3.53			CGCP				*C+	F*	B*				LQ1	P					V(		E(		C)					
L									6					6			KN7															
R		113.42	116.95		PYRITE OCCURS AS BOTH A REPLACEMENT MINERAL IN CHERT FRAGMENTS																												
R		113.42	116.95		AND AS A BRECCIA COATING. CALCITE OCCURS AS AN ENVELOPE																												
/		116.95	126.80	9.85			BRHT				*C+						MR8	P										R+				
L									3			B*		3			KO1								V(				B.			
R		116.95	126.80		PYRITE OCCUR AS A REPLACEMENT MINERAL FOR CHERT AND A SELVAGE																												
R		116.95	126.80		AROUND ARGILLITE FRAGMENTS.																												
/		126.80	137.80	11.00			ARSI				SN1	LC						P	1	LM		22	S.				L)				
L									3		SI+			7																		

K E Y	F -L-	F R O M - G	T O -	I N T	RECOV RQD	MD % AGE	ROCK EV	TM RD	TM LC	GM1 GM2	TX TX	TX TX	F S	C C	% O	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		126.80	137.80																														
R		126.80	137.80																														
/		137.80	139.29	1.49						BRHT		*C)	CC				MQ6	P										R+					
L													F*	R*			KP1													R(			
R		137.80	139.29																														
R		137.80	139.29																														
R		137.80	139.29																														
/		139.29	150.60	11.31						BRHM		*S1					LR8	P										**					
L														ND		1	JK)													*.			
R		139.29	150.60																														
R		139.29	150.60																														
R		139.29	150.60																														
/		150.60	179.80	29.20						ARSI	CR		SN1	BD				P	2	BD		65		<)			L+					
L											3		SI=	BR	SS	7																	
R		150.60	179.80																														
R		150.60	179.80																														
R		150.60	179.80																														
/		179.80	183.45	3.65						CGCP		*C1		F*			LP2	P										**					
L											6			B*		4	C KP6																
R		179.80	183.45																														
/		179.80	180.85	1.05			9	BRHT	CR		*C)						KN5	R										**					
L											3			B+	F*	2	JM2																
R		179.80	180.85																														
/		183.45	190.29	6.84				BRHT	CR								LS6	P					V+					B+					
L											4					3	LN3								V(								
/		186.41	187.09	0.68			9	BRPM			*C+			F*			LM=	R										R+					
L											6			B*		5	JN2																
/	FLT	188.62	190.29	1.67			3	SAND	GR				G;	BD	1	3	8 4	R					<=					D+					
L											6			BR		7																	
/		190.29	194.38	4.09				BRHT			*C)			F*			MS6	P					V+					**					
L											3			R*		3 (	KO1														B.		
R		190.29	194.38																														
/		194.38	201.25	6.87				BRPM			*S+	G;					LR2	P										#+					
L											4		*C+	B*	F*	4 + C	JO2								<*								
R		194.38	201.25																														
R		194.38	201.25																														
R		194.38	201.25																														
/	FLT	201.25	203.72	2.47				BRHT			GG7						LO3	P					V)					B)					
L											2		*C+	F*		3	KO2																
/		203.72	209.20	5.48				BRHM						BR			KP8	P										B)					
L											2					3	JN=								V+								

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	TM QM1 QM2	TX	TX	F S	C	% O	M O	ARG CHT	RI	1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		206.01	208.21	0.20		9	SAND				BD		1	3	9	3		R		BD		70							D+					
L								6					8														V=							
/	FLT	209.20	214.41	5.21			BRHT			GG6 BR							LO3	P											R)					
L								2			CC						KL1										V=							
/		212.53	214.41	1.88		8	SAND			GG1 BR			1	3	8	3		R											B+					
L								4					7														V=							
/		214.41	217.32	2.91			ARSI			SN1 SS		BD	1	3	1	3		P	2	BD		67							L+					
L										SI+																	V+							
/	CON	217.32	235.61	18.29			BRHT	CR			BR						LR8	P					V+						B+					
L								2					2				JM=										V)							
/	FAL	223.72	226.80	3.08		X	BRHT	CR		GG9 BR							LR8	R					V+						B+					
L								2					2				JM=										V)							
/		229.26	229.57	0.31		9	SAND			SN7 G:		BD	1	3	7	5		R	2	BD		U72	<+						D=					
L								6		SI+			6																					
/	FLT	232.15	235.61	3.46		X	BRHT	GR		GG5 BR							LR8	R					<=						B+					
L								2					2				JM=										V)							
/	CON	235.61	248.11	12.50			BRHM	CR									MQ8	P											R)					
L								3					2				JK=																	
R		235.61	248.11		PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT.																															
/		248.11	273.80	25.69			BRHT			*S)		H*					MR7	P											H)					
L								3		*C) F*		B*	2		)		KP1										V*							
R		248.11	273.80		PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT FRAGMENTS AND																															
R		248.11	273.80		WITHIN SANDSTONE LAMINATIONS OF ARSI FRAGMENTS.																															
/		258.10	260.30	2.20		X	BRHT	CR		*S)		H*					MR7	R											H)					
L																																		
/		273.80	300.62	26.82			ARSI	CR			SS	(L	1	3	1	3		P	3	BD		52							L)					
L								3			BD	XB	7																					
/		278.42	278.81	0.39		X	BRHT	CR			SS	(L	1	3	1	3		R	3	BD		55							L)					
L								3			BD	XB	7																	B+				
R	SPC	278.42	278.81		SAMPLE D.G. 114 TAKEN AT 278.42 M																															
/		295.96	300.02	4.06		X	BRHT	GR			BR	BD	1	3	1	3		R	3	BD		52							L)					
L																											>=			V(				
R		295.96	300.02		EXTREME VEINING OF ARSI RESULTS IN BRECCIATION OF THIS UNIT.																															
R		295.96	300.02		VEINING APPEARS TO FLOW AROUND ARSI CLASTS.																															
R	SPC	295.96	300.02		SAMPLE D.G. 115 TAKEN AT 297.18 M																															
R	SPC	295.96	300.02		SAMPLE D.G. 116 TAKEN AT 299.80 M																															
/		300.02	300.62	0.60		9	SAND				G:		0	3	9	4		R	2	BD		U65							D+					
L								5					8																					

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R O D	MD % AGE	ROCK EV	TM RO	TM LC	TM QM1 QM2	TX	TX	F S	C	% O	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/	CON	300.62	306.65	6.03			ARGL	CR		MX			0	0		0		P										D(					
L									1				9																					
/		300.62	306.65	6.03		3	BRHT	CR	*C+	(L							KM2	R	3									R=					
L									3		F*	H*	B				LN2																	
R		300.62	306.65		THE PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT FRAGMENTS.																														
R		300.62	306.65		THE BRHT OCCURS AS 5-20 CM INTERBEDS WITHIN THE ARGL.																														
R	SPC	300.62	306.65		SAMPLE D.G. 117 TAKEN AT 301.50 M.																														
/	CON	306.65	312.81	6.16			BRHT			*S+	G;						KR3	P								<)		R+					
L									4		*C=	F*	B*	3		+	LO2																	
R	SPC	306.65	312.81		SAMPLE D.G. 118 TAKEN AT 309.92 M.																														
/	CON	312.81	319.40	6.59			ARSI			SN1	BD	//	0	3	1	3		P	1	BD		50	<*				B)						
L									4		ST	SS	8													>+								
R	SPC	312.81	319.40		SAMPLE D.G. 119 TAKEN AT 313.44 M.																														
/		313.01	313.12	0.11		9	BRHT										JL1	R										B)					
L									3					3			JM2									<+								
/		314.84	315.40	0.56		9	CGCP			GG2	F*						KQ1	R										*+					
L									6		*C3			3		C	KP6									<)								
R	SPC	314.84	315.40		SAMPLE D.G. 120 TAKEN AT 314.88 M.																														
/		317.42	317.81	0.39		8	BRHT	SF	*C(		F*						KL2	R										D+					
L									4			B*		3			JK1									>5								
R		317.42	317.81		SAMPLE D.G. 121 TAKEN AT 317.63 M.																														
/		319.40	325.01	5.61			BRHT										LP3	P										D+					
L									5					3			JP2									C)								
K	M/B	319.40	319.40	0.00																														
/		319.40	320.87	1.47		8	SAND			SN7	G;	BD	0	3	7	6		R	2	BD		U50					D+					
L									5		SI1			7																				
/	CON	325.01	332.05	7.04			BRPM	CR	*C)	BD							LP2	P	2	BD		55						R)					
L									1		F*	R*	2				JMT																	
R		325.01	332.05		THE PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT CLASTS, AND																														
R		325.01	332.05		THE SANDSTONE LAMINATIONS OF THE ARSI CLASTS. THE AMOUNT OF																														
R		325.01	332.05		CHERT IN THE FORM OF SANDSTONE SIZED PARTICLES INCRESEASES NEAR																														
R		325.01	332.05		THE BASE OF THIS UNIT, ARGL INTERBEDS ARE 10-25 CMS IN WIDTH.																														
/	CON	332.05	335.78	3.73			ARGL	CR		MX			0	0		0		P										D)					
L													9																					
/		335.01	335.78	0.77		4	SAND	GR		SN7	FE	LC	0	3	7	5		R										D1					
L									3					8																				
/	CON	335.78	341.66	5.88			BRHT	CR	*C+		R*						LQ3	P										R=					
L									2		B*	F*					JN1																	

K F -L- Y G	F R O M -	T O -	I N T	RECOV RQD	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX TX	F TX	C S	% C	M O	ARG O CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/	338.70	339.30	0.60		9	ARGL	CR		SN+	MX	0	3	+	3		R											D*					
L							1						8																			
R	338.70	339.30	A SANDY 10 CM UNIT IS PRESENT ABOVE THE MASSIVE ARGL.																													
/	339.50	339.60	0.10		X	BRHT	CR		*C+	R*					LQ3	R											R=					
L																									<=							
/ FLT	341.66	348.11	6.45			BRPM	CR		GG2						LQ4	P											L+					
L							2		*C(F*		2				JL=										V)							
R	341.66	348.11	PYRITE OCCURS AS BOTH A REPLACEMENT MINERAL IN CHERT FRAGEMENTS																													
R	341.66	348.11	AND AS FINE LAMINATIONS WITHIN THE MUDSTONE MATRIX.																													
/	348.11	349.61	1.50			CGCP			*C)	F*					LQ3	P											R+					
L							5			R*	4		C	JN3																		
R	348.11	349.61	PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT FRAGMENTS.																													
K M/A	348.11	348.11	0.00																													
/	348.11	348.57	0.46		8	SAND			G;		0	3	8	4		R		BD		U50	V+					D+					
L							6				BD	8													V)							
R SPC	348.11	348.57	SAMPLE D.G. TAKEN AT 349.00 M.																													
/ CON	349.61	355.14	5.53			CGBR			*S+	G;					KP2	P											H+					
L									*C	B*	F*	5	+		JN4																	
/ CON	355.14	361.92	6.78			ARSI	CR		SI=	BD	G;	0	3	1	5	P	3			U60					<.		L+					
L							1		SN1			8																					
R	355.14	361.92	THE PYRITE OCCURS AS A REPLACEMENT MINERAL IN THE SAND-SILT																													
R	355.14	361.92	BEDS, WHICH ARE INTERCALATED WITH THE MORE MASSIVE ARGILLIC BEDS																													
R SPC	355.14	361.92	SAMPLE D.G. 144 TAKEN AT 356.85 M.																													
R SPC	355.14	361.92	SAMPLE D.G. 145 TAKEN AT 359.86 M.																													
/	357.90	358.71	0.81		9	BRHT			*S)	(L		L	O	8		R											R=					
L							3					3	N	1	K																	
R	357.90	358.71	THE PYRITE OCCURS AS REPLACEMENT MINERALIZATION WITHIN CHERT.																													
/	359.66	359.86	0.20		X	ARSI	CR		GG8	BD	G;	0	3	1	5	R	3			U60					<*		L+					
L																																
R	359.66	359.86	THE GOUGE COULD REPRESENT A MINOR FAULT.																													
/	361.92	375.86	13.94			ARGL	CR		SN+	BD					03+3	P	3	BD		57							D+					
L							1		SI)		8																					
/	361.92	375.86	13.94		2	BRHT									KP	R											R=					
L							2				3				JL2																	
R	361.92	375.86	THE PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT CLASTSTS.																													
/	375.86	398.12	22.26			ARGL	CR			BD	MX	0	2	+	2	P	1	BD		75					<.		L+					
L							1				9														<.							
R SPC	375.86	398.12	SAMPLE D.G. 146 TAKEN AT 375.92 M , D.G. 147M AT 377.4 M AND																													

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	QM2	TX TX	TX TX	F S	C C	% D	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R	SPC	375.86	398.12																															
					383.86 M.																													
/		390.24	391.26	1.02			X	ARGL	CR		BD	MX	0	2	+	2		R	1	BD		75					<(		V1				
L																												V2						
R	SPC	390.24	391.26		SAMPLE D.G. 149 TAKEN AT 390.78 IS REPRESENTATIVE OF THE																													
R	SPC	390.24	391.26		NETWORK VEINING IN THIS INTERVAL.																													
/		398.12	402.24	4.12				BRHT		*C)	G;	H*						KP4		P									H+				
L									3		F*	B*	3					JM1										<(						
R		398.12	402.24		WITHIN THIS INTERVAL THE MATRIX IS MADE UP OF SAND SIZED																													
R		398.12	402.24		PARTICLES. PYRITE IS FOUND AS A REPLACEMENT MINERAL IN CHERT																													
R		398.12	402.24		FRAGMENTS . IND NORMAL GRADING CYCLES ARE ALSO OBSERVED WITHIN																													
R		398.12	402.24		THIS INTERVAL.																													
/		398.17	399.72	1.55			5	SILT		SI7	G;	(L	2	3	2	3		R	3			U72							L+				
L									4		SN2					8																		
R		398.17	399.72		SANDSTONE BEDS OF 3 MM THICK ARE INTERBEDDED WITH SILTSTONE																													
R		398.17	399.72		BEDS THAT RANGE FROM 3-5 CM IN THICKNESS. THE SANDSTONE BEDS																													
R		398.17	399.72		ARE SLIGHTLY LENSOIDAL AND DISPLAY LOADCAST AND FLAME STRUCTURE.																													
R		398.17	399.72		WITHIN THE SILTSTONE BEDS																													
/		402.24	419.10	16.86				ARGL	CR		MX		0	0		0		P											L+				
L									1					9																			
/		402.24	419.10	16.86			3	BRPM		*C,	ND	SS						MN8		R									R+				
L									3			B*	3					JL=															
R		402.24	419.10		THE BRPM BEDS RANGE FROM 15-160 CM AND ARE INTERBEDDED WITH																													
R		402.24	419.10		BEDS OF ARGL THAT VARY FROM 100-150 CM IN THICKNESS.																													
R		402.24	419.10		THE PYRITE OCCURS AS NODULES DUE TO THE COMPLETE REPLACEMNENT OF																													
R		402.24	419.10		CHERT FRAGMENTS.																													
/		419.10	423.67	4.57				ARSN		SN3	G;	(L	0	3	5	5		P	2			U65	V)						R)				
L									3		SI2					7																	
R		419.10	423.67		PYRITE OCCURS AS A REPLACEMENT MINERAL IN SANDSTONE SIZED																													
R		419.10	423.67		FRAGMENTS.																													
/		423.67	425.50	1.83				BRPM										LM1		P									R+				
L									3							5		KL=															
K	M/O	425.50	425.50	0.00																														
/		425.50	427.02	1.52				SAND			LC	G;	2	3	8	6		P				U60						D)				
L									4			LM	8																				
/	FLT	427.02	428.65	1.63				BRHT	CR		GG3							LP3		P				V+					R+				
L									3		*G(	F*	B*	3				KM2															
/		428.65	440.07	11.42				ARSI			SN2	BD	(L	0	3	2	3		P	1		U70						L+				
L									3			LC	SS	7																			
/	FLT	431.60	431.85	0.25			8	CGCP			GG2							KM1		R				<)					*+				
L									6		*G)			4				JL4															

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV P O D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	TX QM2	TX TX	F S	C C	% O O	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		431.85	440.07	8.22			+	BRHT									KN2	R										B+					
L									3				3				JM1																
R		431.85	440.07		THE BRHT UNIT OCCURS IN THIN 3-20 CM INTERCALATED BEDS. THE																													
R		431.85	440.07		ARSI BEDS ARE THICK 2-3 METER INTERVAL.																													
/		440.07	447.68	7.61				ARGL	CR		SN+	SS	BD					P	1	BL		65					B+					
L									2				ND	8																		
R	SPC	440.07	447.68		SAMPLE D.G. 151 TAKEN AT 442.30 M.																													
/		447.68	462.38	14.70				BRHT			*C=	R*	F*				MS7	P										R+					
L									3A		*S)	H*	B*	2	)		KO1																
R		447.68	462.38		SAND BANDED ARGILLITE PREDOMINANTLY SANDSTONE.																													
R		447.68	462.38		THE MATRIX IS PREDOMINANTLY SANDSTONE.																													
/		452.32	452.77	0.45			X	BRHT			*C=	R*	F*				MS7	R										R1					
L																																
/		462.38	485.84	23.46				BRPM			*C=		F*				KO1	P						<(		<*		D*		<(			
L									5A		*S(	B*	H*	4	)	0	MO2																
R	SPC	462.38	485.84		SAMPLE D.G. 172 TAKEN AT 473 METERS IS A PEBBLY MUDSTONE WITH																													
R		462.38	485.84		A SANDSTONE MATRIX. ALONG THE FRACTURES A BRIGHT, MEDIUM BLUE																													
R		462.38	485.84		MINERAL OCCURS. ASSOCIATED WITH THIS UNKOWN MINERAL IS A FINE																													
R		462.38	485.84		GRAINED WHITE BARITE. THE UNKOWN MINERAL OCCURS THROUGH OUT THE																													
R		462.38	485.84		PEBBLY MUDSTONE, AND MAY BE A HANGING WALL MINERAL ASSOCIATED																													
R		462.38	485.84		WITH THE ORE ZONE.																													
/		473.92	485.84	11.92			X	BRPM			*C=		F*				KO1	R						<(		<*		D*		<(			
L																																
/		485.84	487.98	2.14				SILT	CR			VG		1	1	1		P						<(		<+		<(					
L									3A					9																			
/		487.25	487.52	0.27			6	SAND	SF		CH7			1	3	7	3	R						<+		<=		D+					
L									4A					8															D(				
R		487.25	487.52		SMALL FE-RICH SPHALERITE CRYSTAL ARE FOUND IN 3 MM VUGS.																													
K	UM1	487.98	487.98	0.00																													
/		487.98	489.75	1.77				LMSX	SF			LC						P	0	LM		75	L4			<(	L3		L=				
L									9R			BR																		L2				
/		487.52	487.77	0.25			9	LMSX	SF		CH7	LC						R	1				L7			<(	L2		L+				
L									9A				BR																	L1				
R		487.52	487.77		WITHIN THIS CHERTY UNIT BRECCIATED FRAGMENTS AND VERY THINLY																													
R		487.52	487.77		LAMINATED BEDS OF CARBONACEOUS ARGILLITE ARE INTERCALATED WITHIN																													
R		487.52	487.77		THE LAMINATED SULPHIDE.																													
/		488.37	489.75	1.38			2	SILT	CR			MX		1	1	1		R		C/	77					<+							
L									2A					9																			
R		488.37	489.75		SILTSTONE BEDS FROM 1.5 TO 13 CM ARE INTERBEDDED WITHIN THE																													

K	F	FROM -	TO -	INT	RECOV	MD	% ROCK	TM	TM	QM1	TX	TX	F	C	%	M	ARG	RI	1	ID	AZM	DIP	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A 1	A 2
E	-L-	----.--	----.--	---.--	---.--	--	- ----	--	--	---	--	--	-	-	-	-	----	---	-	--	---	---	--	--	--	--	--	--	--	--	--	--	-	-
Y	G				R Q D	AGE	EV RK	LC	TM	QM2	TX	TX	S	C	O	O	CHT		2	ID	AZM	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA		

R 488.37 489.75 LAMINATED SILICEOUS SULPHIDE BEDS, WHICH AVERAGES 20 CMS THICK.
R 488.37 489.75 THESE SILTSTONE BEDS ARE CONVOLUTED, AND OFFSET BY MINOR
R 488.37 489.75 FAULTING IN CERTAIN AREAS.

/ FSX 489.75 491.10 1.35 FGSX SF SS BR P LS L= B1 D1
L 9R LC *3
R 489.75 491.10 THIS UNIT IS PROBABLY FRAGMENTED DUE TO SOFT SEDIMENT SLUMP,
R 489.75 491.10 WHICH CAUSES THE LAMINATED SULPHIDE TO OFFSET AND ROTATE.
R 489.75 491.10 CARBONACEOUS ARGILLITE AND SILTSTONE FRAGMENTS AVERAGE 3 CMS IN
R 489.75 491.10 DIAMETER AND RANGE FROM 0.2 CM TO 8 CM IN DIAMETER.

/ LSX 491.10 492.25 1.15 LMSX SF LC P 1 LM 70 L4 L+ E+
L 9R BR L1 L2
R 491.10 492.25 THE GALENA APPEARS TO FORM AN ENVELOPE AROUND THE MARCASITE RICH
R 491.10 492.25 LAYERS. MARCASITE RICH UNITS OF 4 CM THICKNESS INTERCALATE
R 491.10 492.25 WITHIN 30 CM UNITS OF LAMINATED SILICEOUS SULPHIDE. THESE
R 491.10 492.25 MARCASITE RICH UNITS SHOW A HIGHER DEGREE OF INTERNAL BRECCIA-
R 491.10 492.25 TION.

/ 492.25 492.94 0.69 SILT BD LC 1 1 1 P 1 BD 85 <= D+
L 5A 8 L2 L1

/ FSX 492.94 493.62 0.68 FGSX SF BR SS P *3 *+
L 4A LC B2 *1
R 492.94 493.62 SILTSTONE AND LAMINATED SULPHIDE FRAGMENTS AVERAGE 2 CMS. IN
R 492.94 493.62 DIAMETER AND RANGE FROM .3 TO 6 CM IN DIAMETER. FRAGMENTS ARE
R 492.94 493.62 HIGHLY ANGULAR AND APPEAR TO HAVE BEEN DISPLACED VERY LITTLE
R 492.94 493.62 FROM THEIR PLACE OF ORIGIN . BRECCIATION PROBABLY RESULTS FROM
R 492.94 493.62 SOFT SEDIMENT SLUMP.

/ LSX 493.62 495.30 1.68 LMSX SF LC P 0 L6 L= L+
L 8Y B1 L2

/ 493.62 493.73 0.11 8 SILT CR SN2 1 2 3 3 R C/ 67 L1 L=
L 4A SI6 8 B3 D1
R 493.62 493.73 THE STRATIGRAPHIC TOP OF THE SILTSTONE BED IS RICH IN MARCASITE.

/ 495.30 497.62 2.32 BRPM KO1 P <+ D* <+ *+
L 4A 3 1 <= *=
R 495.30 497.62 THE FRAGMENTS ARE EXTREMELY ANGULAR WHICH INDICATES A SHORT
R 495.30 497.62 TRANSPORT DISTANCE. THE "OTHER FRAGMENTS" CLASSIFICATION (I.E.
R 495.30 497.62 LOWER TIER, COLUMN 41) IS COMPOSED OF LAMINATED SILICEOUS
R 495.30 497.62 SULPHIDES. THESE ANGULAR CLASTS AVERAGE 4 CM IN DIAMETER AND
R 495.30 497.62 RANGE FROM .4 TO 15 CMS IN DIAMETER. IT IS COMMON TO SEE
R 495.30 497.62 CARBONACEOUS SILTSTONE LAMINATIONS WITHIN THESE LAMINATED
R 495.30 497.62 SULPHIDE BRECCIA. IT SEEMS LIKELY THAT A DEBRIS FLOW HAS
R 495.30 497.62 PARTIALLY ERODED THE ORE ZONE, AFTER WHICH SULPHIDE DEPOSITION
R 495.30 497.62 CONTINUED.

/ 495.30 495.61 0.31 9 SILT CR SI3 LC 1 2 1 3 R 0 LM 69 <) D*
L 4D SN1 BR 8 L5 L+

K E Y	F -L-	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	TM GM1 GM2	TX TX	TX TX	F S	C C	% M O O	ARG CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		495.30	495.61		THIS FINELY LAMINATED SILTSTONE IS EXTREMELY RICH IN FE-																											
R		495.30	495.61		SULPHIDES AND PERHAPS SHOULD BE CONSIDERED AS A LAMINATED SUL-																											
R		495.30	495.61		PHIDE. MILD BRECCIATION HAS OCCURRED, RESULTING IN SOME ANGULAR,																											
R		495.30	495.61		ARGILLIC CLASTS.																											
K	LM1	497.62	497.62	0.00																												
/		497.62	499.00	1.38		SILT	CR		SI7		LM	1	2	2	2		P	1	LM		70	V=			<+						
L								3A		SN2	LC	LC	8																B=	<+		
R		497.62	499.00		FE-SULPHIDES OCCUR AS SMALL BLEBS, WITHIN SILICATE LENSES, THAT																											
R		497.62	499.00		PARRALLEL BEDDINGS. QUARTZ VEINS CONTAIN SOME SPHALERITE, AND																											
R		497.62	499.00		CROSSCUT BEDDINGS. PYRITE ALSO OCCURS IN 0.4 CM LAMINATIONS																											
R		497.62	499.00		WITHIN THE SILTSTONE. LOADCASTS WERE OBSERVED BETWEEN THE PYRITE																											
R		497.62	499.00		RICH QUARTZ LENSES AND THE SILTSTONE HOST, INDICATING A SYNSE-																											
R		497.62	499.00		DIMENTARY PERIOD FOR LENSE FORMATION.																											
/		499.00	501.00	2.00		SILT	CR		SI7		LM	1	2	2	2		P	1	LM		75	V=			<+						
L																																
/		501.00	503.53	2.53		SILT	CR		SI7		LM	1	2	2	2		P	1	LM		72	V=			<+						
L																																
/	LSX	503.53	504.14	0.61		LMSX			LC								P	1				L2			L)					L1		
L								8D		VG	MX																		M3	L3		
R		503.53	504.14		HIGHLY CONVOLUTED LAMINATED SULPHIDES ARE INTERCALATED WITH A																											
R		503.53	504.14		7 CM THICK BED OF MASSIVE MARCASITE. THE MASSIVE SULPHIDE IS																											
R		503.53	504.14		EXTREMELY VUGGY AND APPEARS TO BE A PRODUCT OF OPEN SPACE																											
R		503.53	504.14		FILLING. CARBONACEOUS SILTSTONE BEDS, AVERAGING 1 CM IN																											
R		503.53	504.14		THICKNESS, ARE ALSO INTERBEDDED WITHIN THE LAMINATED SULPHIDE																											
R		503.53	504.14		AND CONSTITUTE 10% OF THE TOTAL INTERVAL.																											
/	FLT	504.14	509.45	5.31		SILT	CR		SI8	LM		1	1		1		P	1	LM		50	<+			<+		D)					
L								3A				8																		<)		
R		504.14	509.45		THIS INTERVAL IS EXTREMELY BROKEN UP. IT IS LIKELY THAT THE																											
R		504.14	509.45		LAMINATED SULPHIDE ABOVE THE SILTSTONE IS PART OF THE MAIN ORE																											
R		504.14	509.45		BODY AND HAS BEEN DISPLACED TO ITS PRESENT POSITION BY																											
R		504.14	509.45		SUBSEQUENT FAULTING.																											
/	FLT	509.45	533.40	23.95		ARGL	CR		GG1	MX		0	0		0		P					<+			<(		B)					
L								1A			ND	9																				
R		509.45	533.40		THIS UNIT IS HIGHLY BROKEN AND SHEARED. SLICKENSIDE SURFACES																											
R		509.45	533.40		ARE OBSERVED WITHIN SHEARED ZONES. PYRITE IS OCCASIONALLY																											
R		509.45	533.40		OBSERVED AS THIN .3 CM LAMINATIONS WITHIN THE MASSIVE ARGILLITE.																											
/		533.40	553.83	20.43		ARSI	CR		SN1	SS	XB	0	3	1	3		P	1	BD		U70						<+					
L								3A			BD	8														V)						
R		533.40	553.83		THE SANDSTONE LAMINATIONS WITHIN THE ARGILLITE ARE LENSOIDAL																											
R		533.40	553.83		AND CROSSBEDDED. OFFSETS ON BEDDING ARE DUE TO SOFT SEDIMENT																											
R		533.40	553.83		SLUMP. THIS INTERVAL IS HIGHLY BROKEN, BUT NOT AS BADLY GOUGED																											
R		533.40	553.83		AS THE PREVIOUS ARGILLITE (IE 509.45 TO 533.40 M).																											

A UMM				RQD	SP.GR.	
A TYP				CM	SG	
A MTH				B-B	WEIGH	
A LAB				FLD	FLD	
R ASY	0.00	0.00	RCOV=RECOVERY(C17-20) IS MEASURED IN CM BLOCK TO BLOCK(B-B)			
R ASY	0.00	0.00	RQD=ROCK QUALITY DESIGNATOR(C27-32)MEASURED IN CM BLOCK TO BLOCK			
R ASY	0.00	0.00	RQD IS THE TOTAL LENGTH (BETWEEN BLOCKS) OF PIECES OF CORE			
R ASY	0.00	0.00	AT LEAST 2-1/2 TIMES DIAMETER OF CORE TO NEAREST CM, DIVIDED			
R ASY	0.00	0.00	BY LENGTH OF INTERVAL = BLOCK(TO) MINUS BLOCK(FROM)TIMES 100			
R ASY	0.00	0.00	CM INDICATES THAT MEASUREMENTS ARE IN CM'S WHICH ARE TO BE RIGHT			
R ASY	0.00	0.00	JUSTIFIED AGAINST THE DOUBLE VERTICAL LINE AT RIGHT MARGIN			
R ASY	0.00	0.00	OF EACH FIELD.			
R ASY	0.00	0.00	B-B=BLOCK-TO-BLOCK (DRILLERS BLOCKS). ENTER METRAGE OF ONE BLOCK			
R ASY	0.00	0.00	AS THE TO OF ANY INTERVAL AND THE METRAGE OF THE NEXT BLOCK.			
R ASY	0.00	0.00	ADDITIONAL POINTS (FROM-TO'S) CAN BE ESTABLISHED BETWEEN			
R ASY	0.00	0.00	BLOCKS TO BRACKET SPECIFIC INTERVALS OF LOCALIZED POOR			
R ASY	0.00	0.00	RECOVERY. B-B IS ENTERED RIGHT JUSTIFIED IN EACH FIELD IN			
R ASY	0.00	0.00	THE AMTH HEADER.			
R ASY	0.00	0.00	THE FIRST INTERVAL, THROUGH THE OVERBURDEN, WITH ZERO RECOVERY,			
R ASY	0.00	0.00	SHOULD BE ENTERED FIRST -- SEE BELOW.			
A 100	0.00	4.45	00	00		
R ASY	0.00	4.45	OVERBURDEN			
A 100	4.45	5.18	73	00		
A 100	5.18	7.01	169	80		
A 100	7.01	9.45	212	135		
A 100	9.45	12.50	278	228		
A 100	12.50	12.98	48	28	2.68	
A 100	12.98	14.33	123	94		
A 100	14.33	17.37	248	185		
A 100	17.37	19.51	198	155		
A 100	19.51	21.34	169	39		
A 100	21.34	24.38	225	139		
A 100	24.38	26.21	183	16		
A 100	26.21	27.13	81	48		
A 100	27.13	28.04	48	30		
A 100	28.04	31.09	296	250		
A 100	31.09	32.61	149	84		
A 100	32.61	34.75	188	165		

A UMM				RQD	SP.GR.	
A TYP				CM	SG	
A MTH				B-B	WEIGH	
A LAB				FLD	FLD	
A	100	34.75	38.10	302	226	
A	100	38.10	38.71	61	47	
A	100	38.71	42.06	318	206	
A	100	42.06	42.67	59	00	
A	100	42.67	46.02	332	169	
A	100	46.02	49.38	318	221	
A	100	49.38	51.82	244	131	
A	100	51.82	54.56	272	116	
A	100	54.56	55.17	61	000	
A	100	55.17	58.22	305	160	
A	100	58.22	61.57	304	204	
A	100	61.57	64.01	227	80	
A	100	64.01	67.36	313	212	
A	100	67.36	69.49	209	91	
A	100	69.49	71.63	198	85	
A	100	71.63	72.24	48	20	
A	100	72.24	74.98	264	80	
A	100	74.98	78.21	293	46	
A	100	78.21	83.21	500	134	
A	100	83.21	86.44	312	105	
A	100	86.44	87.17	61	00	
A	100	87.17	87.78	58	21	
A	100	87.78	89.61	145	46	
A	100	89.61	92.96	294	69	2.68
A	100	92.96	96.32	302	130	
A	100	96.32	99.36	304	137	
A	100	99.36	102.41	305	162	2.55
A	100	102.41	105.77	292	216	
A	100	105.77	108.81	255	127	2.67
A	100	108.81	111.86	305	159	2.44
A	100	111.86	114.91	305	200	2.71
A	100	114.91	117.96	298	174	
A	100	117.96	121.01	293	130	2.67
A	100	121.01	124.05	304	150	
A	100	124.05	127.10	197	97	2.71
A	100	127.10	130.15	301	212	
A	100	130.15	133.20	305	100	
A	100	133.20	136.25	303	151	
A	100	136.25	139.29	292	162	2.68
A	100	139.29	142.34	297	201	
A	100	142.34	145.39	305	182	2.67
A	100	145.39	148.44	294	181	
A	100	148.44	151.49	282	89	
A	100	151.49	154.53	297	186	
A	100	154.53	157.58	300	93	2.75
A	100	157.58	160.63	258	125	
A	100	160.63	163.68	302	96	
A	100	163.68	166.73	278	118	
A	100	166.73	169.77	303	167	
A	100	169.77	172.82	292	164	
A	100	172.82	175.87	283	00	

A UMM				RQD	SP.GR.
A TYP				CM	SG
A MTH				B-B	WEIGH
A LAB				FLD	FLD
A 100	175.87	178.00	213	00	
A 100	178.00	178.92	92	00	
A 100	178.92	180.75	150	00	
A 100	180.75	183.79	288	95	2.59
A 100	183.79	185.01	117	24	
A 100	185.01	188.06	288	75	
A 100	188.06	189.89	180	19	
A 100	189.89	193.24	307	00	2.67
A 100	193.24	195.99	275	00	
A 100	195.99	199.03	296	136	2.68
A 100	199.03	200.25	110	17	
A 100	200.25	203.30	298	51	2.55
A 100	203.30	204.52	105	00	
A 100	204.52	205.74	102	00	
A 100	205.74	206.35	55	00	2.65
A 100	206.35	207.89	107	00	
A 100	207.89	209.40	113	00	
A 100	209.40	211.53	120	00	
A 100	211.53	213.97	235	00	
A 100	213.97	214.88	91	00	
A 100	214.88	215.49	58	00	2.62
A 100	215.49	216.71	94	00	
A 100	216.71	217.32	34	00	2.73
A 100	217.32	218.54	71	00	
A 100	218.54	220.07	129	00	
A 100	220.07	220.68	46	00	
A 100	220.68	221.59	69	00	
A 100	221.59	223.72	45	00	
A 100	223.72	225.86	156	00	
A 100	225.86	228.30	241	00	
A 100	228.30	230.73	141	00	
A 100	230.73	231.65	63	00	2.69
A 100	231.65	235.61	290	00	
A 100	235.61	238.35	166	00	
A 100	238.35	239.88	153	28	
A 100	239.88	242.93	273	103	2.68
A 100	242.93	244.45	152	28	
A 100	244.45	247.80	304	55	
A 100	247.80	249.02	112	00	2.66
A 100	249.02	252.07	305	139	
A 100	252.07	253.59	152	47	
A 100	253.59	254.51	10	00	
A 100	254.51	257.56	283	17	
A 100	257.56	259.38	142	81	
A 100	259.38	260.30	53	00	
A 100	260.30	261.82	97	38	
A 100	261.82	263.65	178	125	
A 100	263.65	265.79	155	00	
A 100	265.79	267.61	143	45	
A 100	267.61	267.92	26	00	
A 100	267.92	268.83	32	00	

A	UMM			RQD	SP.GR.	
A	TYP			CM	SG	
A	MTH			B-B	WEIGH	
A	LAB			FLD	FLD	
A	100	268.83	269.14	21	00	
A	100	269.14	270.05	79	19	
A	100	270.05	270.97	71	23	
A	100	270.97	273.41	80	00	
A	100	273.41	274.02	19	00	
A	100	274.02	274.93	61	00	
A	100	274.93	275.84	71	00	
A	100	275.84	278.28	198	97	
A	100	278.28	278.89	57	23	
A	100	278.89	280.42	93	00	
A	100	280.42	282.85	92	00	2.67
A	100	282.85	283.34	38	00	
A	100	283.34	284.68	89	00	
A	100	284.68	285.29	61	00	
A	100	285.29	286.21	92	19	
A	100	286.21	288.65	105	00	
A	100	288.65	290.17	139	00	
A	100	290.17	292.00	145	00	
A	100	292.00	293.83	173	00	
A	100	293.83	295.96	120	58	
A	100	295.96	297.18	122	00	
A	100	297.18	298.40	103	42	
A	100	298.40	302.06	271	80	
A	100	302.06	305.41	295	61	2.68
A	100	305.41	308.46	288	69	
A	100	308.46	311.81	297	195	2.51
A	100	311.81	315.16	297	108	
A	100	315.16	316.99	115	00	
A	100	316.99	320.04	280	34	2.65
A	100	320.04	322.17	148	17	
A	100	322.17	325.22	202	00	2.67
A	100	325.22	327.96	175	26	2.65
A	100	327.96	331.01	274	74	
A	100	331.01	334.06	296	38	2.68
A	100	334.06	337.72	233	00	
A	100	337.72	340.16	227	54	2.72
A	100	340.16	342.90	201	25	
A	100	342.90	344.42	79	00	
A	100	344.42	346.56	214	00	2.65
A	100	346.56	349.61	268	59	2.61
A	100	349.61	352.65	276	23	
A	100	352.65	352.96	10	00	
A	100	352.96	356.01	276	21	2.61
A	100	356.01	356.31	9	00	
A	100	356.31	357.38	87	00	2.65
A	100	357.38	359.66	195	00	
A	100	359.66	361.80	211	46	
A	100	361.80	363.63	163	33	
A	100	363.63	366.67	192	122	2.70
A	100	366.67	369.72	297	141	
A	100	369.72	373.08	326	37	

A	UMM			RQD	SP.GR.	
A	TYP			CM	SG	
A	MTH			B-B	WEIGH	
A	LAB			FLD	FLD	
A	100	373.08	376.43	86		
A	100	376.43	377.04	00		
A	100	377.04	380.09	35		
A	100	380.09	381.61	42		
A	100	381.61	384.66	92	2.64	
A	100	384.66	386.79	29		
A	100	386.79	389.23	00		
A	100	389.23	390.75	19		
A	100	390.75	392.87	00		
A	100	392.87	395.33	00		
A	100	395.33	398.37	20		
A	100	398.37	401.42	19	2.55	
A	100	401.42	404.47	111		
A	100	404.47	406.60	37		
A	100	406.60	409.80	76		
A	100	409.80	410.26	00	2.67	
A	100	410.26	412.39	28		
A	100	412.39	413.61	00		
A	100	413.61	414.83	00		
A	100	414.83	416.66	28		
A	100	416.66	419.10	00		
A	100	419.10	421.54	17		
A	100	421.54	423.67	23	2.67	
A	100	423.67	424.28	36		
A	100	424.28	427.02	00	2.66	
A	100	427.02	428.85	00	2.64	
A	100	428.85	430.99	20		
A	100	430.99	432.51	00		
A	100	432.51	434.95	00		
A	100	434.95	435.86	00		
A	100	435.86	439.22	67	2.76	
A	100	439.22	441.05	00		
A	100	441.05	441.96	00		
A	100	441.96	442.87	00	2.73	
A	100	442.87	443.48	00		
A	100	443.48	444.70	00		
A	100	444.70	445.92	00		
A	100	445.92	447.14	00		
A	100	447.14	449.28	00		
A	100	449.28	450.80	38		
A	100	450.80	452.32	00		
A	100	452.32	455.68			
A	100	455.68	458.72	00	2.67	
A	100	458.72	459.33	00		
A	100	459.33	460.25	00		
A	100	460.25	462.38	17		
R	ASY	460.25	461.47	GROUND		
A	100	462.38	465.43	52		
A	100	465.43	468.48	18	2.59	
A	100	468.48	471.53	96		
A	100	471.53	473.66	27		

					RQD	SP.GR.
A	UMM				CM	SG
A	TYP				B-B	WEIGH
A	LAB				FLD	FLD
R	ASY	471.53	471.83	GROUND		
A	100	473.66	475.18	61	00	
A	100	475.18	475.79	16	00	
A	100	475.79	477.01	73	00	
A	100	477.01	478.54	110	00	
A	100	478.54	480.67	165	00	
A	100	480.67	481.89	98	00	
A	100	481.89	483.11	122	23	
A	100	483.11	486.16	284	32	
A	100	486.16	486.77	61	00	
A	100	486.77	487.07	00	00	
R	ASY	486.77	487.07	GROUND		
A	100	487.07	487.98	55	00	
A	100	487.98	489.75	177	123	
A	100	489.75	492.25	190	13	
A	100	492.25	492.94	26	00	
A	100	492.94	493.62	68	43	
A	100	493.62	495.30	76	00	
A	100	495.30	497.20	165	34	
A	100	497.20	499.00	124	25	
A	100	499.00	501.00	122	00	
A	100	501.00	503.53	213	00	
A	100	503.53	504.14	32	00	
A	100	504.14	505.05	50	00	
A	100	505.05	506.58	93	00	
A	100	506.58	508.10	135	12	
A	100	508.10	509.02	85	16	
A	100	509.02	509.93	80	12	2.59
A	100	509.93	510.84	91	32	
A	100	510.84	512.06	93	00	
A	100	512.06	512.67	47	00	
A	100	512.67	513.59	57	00	
A	100	513.59	514.50	89	12	
A	100	514.50	515.72	87	12	
A	100	515.72	516.94	110	00	
A	100	516.94	517.25	27	00	
A	100	517.25	518.16	52	00	
A	100	518.16	519.07	63	00	
A	100	519.07	520.29	83	00	2.70
A	100	520.29	521.82	146	23	
A	100	521.82	523.04	93	00	
A	100	523.04	524.26	122	00	
A	100	524.26	525.17	72	00	
A	100	525.17	525.78	61	00	
A	100	525.78	527.00	94	29	
A	100	527.00	527.61	58	15	
A	100	527.61	528.52	56	00	
A	100	528.52	529.74	121	12	
A	100	529.74	530.66	78	00	
A	100	530.66	531.88	106	00	
A	100	531.88	533.40	145	19	

					RQD	SP.GR.
A	UMM				CM	SG
A	TYP				B-B	WEIGH
A	LAB				FLD	FLD
A	100	533.40	534.01	48	00	
A	100	534.01	535.53	152	23	
A	100	535.53	536.75	120	00	
A	100	536.75	538.28	121	63	
A	100	538.28	538.89	61	17	
A	100	538.89	540.11	87	00	2.71
A	100	540.11	541.02	84	17	
A	100	541.02	542.24	122	00	
A	100	542.24	543.76			
A	100	543.76	545.29	153	99	
A	100	545.29	546.20	76	13	
A	100	546.20	547.12	92	28	
A	100	547.12	548.64	152	82	
A	100	548.64	549.55	91	21	
A	100	549.55	550.16	59	00	
A	100	550.16	551.69	113	17	
A	100	551.69	552.60	91	52	
A	100	552.60	553.84	12	00	

R SUM DRILL HOLES DDH81-75 AND DDH77-22 CORRELATED WELL USING

R SUM MARKER BEDS D,B,A AND O. CORRELTION WITH DDH78-27 WAS ALSO

R SUM FAIRLY ACCURATE IN PREDICTING THE DRILL HOLE LOCATION, WITH

R SUM RESPECT TO THE ORE ZONE. ONCE IT WAS IT WAS REALIZED THAT THE

R SUM MARKER BED C WAS NOT PRESENT. THIS MARKER BED HAS EITHER BEEN

R SUM FAULTED OUT OR GREATLY REDUCED IN SIZE.

R SUM LITHOGIC UNIT IN DDH81-75, WERE BROKEN SHEARED AND GOUGED

R SUM THROUGHOUT LARGE PORTION OF THE HOLE.MANY UNITS WERE ALSO

R SUM REPEATED, INDICATING A GREAT DEAL OF FAULTING HAS TAKEN PLACE.

R SUM THE ORE ZONE IS APPARENTLY TRUNCATED AT DEPTH BY A MAJOR FAULT.

R SUM A .5 M ZONE OF MINERALIZATION OCCURS 8 METERS PAST THE MAIN

R SUM ORE ZONE AS A RESULT OF THIS FAULT.

R SUM AN UNKOWN BLUE MINERAL WAS OBSERVED IN THE HANGING WALL ROCKS

R SUM ABOVE THE ORE ZONE. IT WAS SAMPLED FOR IDENTIFICATION.

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6B02

DRILLHOLE/TRAVERSE :	81-DH076	COLLAR ELEVATION:	1296.37	AZIMUTH(DEG) :	5.00
TOTAL DEPTH/LENGTH :	168.25	NORTHING(- IF S):	7002568.00	VERTICAL ANGLE :	-59.00
CORE/HOLE DIAMETER :	HQ	EASTING (- IF W):	436555.31	CO-ORD SYSTEM :	UTM

GEOLOGGED BY : JER + AMC
DATE (YY/MM/DD): 810817
PROJECT NUMBER : J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	46.02	7.00	-57.75
2	83.52	10.00	-56.00
3	124.05	13.00	-55.25
4	167.03	16.00	-55.00

K E Y	F L A G	- I N T E R V A L - FROM - TO - INT (UNITS = . DEC.PLACE) (MT=METRIC FT=FOOTRIC)	CORE RECOV- ERY	T- % M O D	M I X	ROCK TYPE	TYPI- FYING 1	GAL MIN TM 2	GM1	TEX- TURES 1	TX 2	GRAIN CHARACS F	F	C	% A	M	ARG	PGT /RI	STRUCTUR-1 T	ID	STK	DIP	ALTERATION MINS H A	H A	H A	H A	H A	ANY MIN	ORE-TYPE MINS SUMMARY H A	H A	H A	ANY MIN	ALT -	ORE -	-	-
																		1		AZM	RT	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A	1	A	2
K E Y	F L G		ROCK QUAL DESIG	FM AGE		RT EN- VIR	TM Q LC- COL	GM2	TX 3	TX 4	S 0 R	C	O	O	CHT / C			2	T	ID	STK	DIP	MG H	MU H	CL H	SD H	QS H	HA H	PR H	MT H	SL H	HA H	1		1	
																						STRUCTUR-2												2		2	
R	SVY	0.00	0.00	ALL SURVEY ARE SPERRY SUN SINGLE SHOT.																																	
/	OVB	0.00	3.77	3.77			OVER											P																			
L																																					
/	WET	3.77	7.88	4.11			CGCP	PY	*C1	R*	F*				MP4			P																		D*	
L								6A		R*	CU				O	LN6																					
R		3.77	7.88	OPEN STRUCTURE INVOLVES CHERT AND ARGILLITE SANDSTONE MATRIX.																																	
/	WET	7.48	7.88	0.40		X	SAND	PY	*C+			4	5	3	7			R																LI	D*	
L								5A	SN9																									C.			
/	WET	7.88	15.86	7.98			BRHM		SI2						NO9			P																	LI	D*	
L								1A																										C.			
/		15.86	19.64	3.78			ARSI		SI1	SS								P	2	BD		62														L*	
L								1A												CL		62															
R		15.86	19.64	PYRITE WITHIN SILT LAMINATIONS. BEDDING PLANE CLEAVAGE.																																	
/		19.64	47.70	28.06			BRHT		*C=		R*				NS8			P																	LI	D(	
L										F*	B*				LO2																	C.		C.			
R		19.64	47.70	CHLORITE IS BRIGHT GREEN.																																	
/		30.76	32.16	1.40		X	BRHM	SF							NP9			R																		D.	
L								1A							LN1																	C.					
/	SHR	30.91	31.00	0.09		X	BRXX								LN3			R															#7			B-	
L								6A																													

K	F	FROM -	TO -	INT	RECOV	MD	%	ROCK	TM	TM	TX	TX	F	C	%	M	ARG	RI	1	ID	AZM	DIP	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A	1	A	2
E	-L-	----.--	----.--	---.--	---.--	--	-	----	--	--	---	--	--	-	-	-	-	----	---	-	--	---	---	---	--	--	--	--	--	--	--	--	--	-	-	-	-
Y	G				R Q D	AGE		EV	RQ	LC	TM	QM2	TX	TX	S	C	O	O	CHT			2	ID	AZM	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA				
/		32.16	32.40	0.24			X	ARSN				SN5	SS		0	3	2	4		R						<=				C.		B*				
L										3A																											
/		33.30	35.40	2.10			X	BRHT			*C=		R*						NS8	R						V*				C.	LI	D(				
L															+	=																					
/		35.40	35.66	0.26			X	SAND							3	4	3	6		R																
L																																					
/		35.66	36.10	0.44			X	BRHT			*C=	CU	R*						NP4	R											LI	D(				
L										2A									6																	
/		36.10	37.07	0.97			X	CGCP			*C1	B*	F*						MP2	R						V)										
L										6A									L08																	
/		37.25	38.50	1.25			X	SAND				G;	SS	3	4		6			R			D	V+							D*				
L										6A																										
/		47.70	53.96	6.26				BRHM			*C)	R*	F*						OR9	P												D-				
L										2A		B*			.	*			M01																	
/		53.96	56.85	2.89				BRHT	SF		*C)	FU	F*						NP8	P																	
L												R*							L02																	
/		53.96	56.85	2.89			5	SAND							3	4	4	6		R												D-				
L										4A																										
/		56.85	60.66	3.81				BRHT	SF		*C.	H*	F*						NS5	P																	
L												R*							M05																	
/		60.66	64.95	4.29				BRHT	SF		*C=	H*	F*						N06	P																	
L												R*							LP4																	
/	FLT	64.12	64.15	0.03			X	FAUL												R																
L										N																										
/		64.15	64.95	0.80			X	SAND				G;	CU	3	4		8			R			D								D*				
L																	3																			
R		64.15	64.95		LARGER CLASTS ARE ARGILLITE, BUT INTERVAL DOMINATED BY CHERT																																	
/		64.95	69.98	5.03				BRHM												P																
L																																				
/	FAL	67.95	68.03	0.08			X	FAUL				GG9								R																
L										N																										
/		69.98	71.96	1.98				ARSI				SH	SS							P	2	BD				<=				<.						
L										1A																					C.					
R		69.98	71.96		TRACES OF CHERT CLASTS MAY BE INJECTIONS OF BRHT.																																	
/		70.17	70.27	0.10			X	SAND				SH	G;		3	4	2	4		R				D60	<*						L+				
L										4A						8																				

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K  F  F R O M - T O -  I N T RECOV  MD % ROCK TM TM [illegible] TX TX F C % M ARG   RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
E -L- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- -- - - - -
Y  G                        R Q D  AGE EV RQ LC TM [illegible] TX TX S C O O CHT      2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA

/ FAL   71.48   71.96   0.48          X FAUL CR    GG7                        R
L                                         N

/       71.96   87.90  15.94            BRHT CR    *C+ H* R*          NS7    P                <-          <-    D*
L                                                   F* B*      )    MO3                              <. <-

/ FLT   75.00   75.19   0.19          X FAUL CR    GG4                        R
L                                         N

/ FAL   75.80   76.28   0.48          X FAUL       GG7                        R
L                                         1A

/ SHR   77.90   78.10   0.20          X BRHT CR    *C+ H* R*          NS7    R                <-          <-    D*
L                                                   GG1 F* B*      )    MO3                              <. <-

/       82.10   83.70   1.60          X CGCP SF    *C) CU B*          MO6    R                >*                D-
L                                         3A                         LN4

/       83.70   84.16   0.46          X SAND CB        SS     3 4 2 6        R                <-
L                                         3A               7
R       83.70   84.16      CALCITE CEMENT.

/       87.90   91.00   3.10            SAND           SS     3 4   4        P  2 BD          V+                L-
L                                         3A               8                                          V*

/       87.90   91.00   3.10          1 ARGL CR      +                       R                                  D-
L                                         N     LM+
R       87.90   91.00      BITUMENS WITHIN QUARTZ VEINS.  PYRITE ALSO IN MASSIVE PATCHES.
R       87.90   91.00      CHERT CLAST FORM A SMALL PORTION OF THE INTERVAL.  SOME APPARENT
R       87.90   91.00      ANGULAR CLASTS MAY BE BROKEN QUARTZ VEINS.  DISTRUCTION OF VEINS
R       87.90   91.00      DURING SOFT SEDIMENT DEFORMATION INDICATES THAT THE VEINS WERE
R       87.90   91.00      PRESENT SHORTLY AFTER DEPOSITION.  POOR ROCK QUALITY PROHIBITS
R       87.90   91.00      DISTINGUISHING STRATIGRAPHIC DIRECTION.

/       91.00   93.22   2.22            BRHT                          NQ5    P                V)          C.    D*
L                                         1A                      O MN4

/       91.00   93.22   2.22          3 ARGL           SS                    R                V*          C.    D*
L                                         1A

/       91.00   93.22   2.22          3 BRPM                                 R                <*          C.    D*
L                                         1A                         LN1
R       91.00   93.22      THE ROCK IN THIS INTERVAL IS TOO HIGHLY FRACTURED TO ALLOW AN
R       91.00   93.22      ACCURATE MEASUREMENT OF ARGILLITTE CLAST SIZE.
R       91.00   93.22      SOFT SEDIMENT DEFORMATION MAKES LITHOLOGICAL IDENTIFICATION
R       91.00   93.22      DIFFICULT BY SHEARING AND STRETCHING THE ARGILLACEOUS COMPONENTS

/ SHR   93.22   97.67   4.45            ARSI       SI2 SS     1 2 2 3        P  2 BD          <)          C*    7*
L                                                         7

/ FAL   93.22   93.72   0.50          X ARSI       SI2 SS     1 2 2 3        R  2 BD          <)          C*    7*
L                                                   GG2       7
```

K E Y	F -L-	FROM ----.--	TO ----.--	INT ---.--	RECOV ---.--	MD % ROCK TM TM QM1 TX TX F C % M ARG RQD AGE EV RQ LC TM QM2 TX TX S C O Q CHT	RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY A 1 A 2 2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA
/	FLT	95.68	97.67	1.99		X ARGL CR S1X 0 1 1 1	R <) C* 7*
L						N GG3 8	
R		95.68	97.67			ROCK HIGHLY FRACTURED. COHESION OCCASIONALLY GIVEN BY QUARTZ	
R		95.68	97.67			VEINING. SLIGHT SILICIFICATION.	
/		97.67	102.41	4.74		BRHT *C= R* *F KM5	P <1 D*
L						2A *B C KN5	
/		97.67	102.41	4.74		4 ARGL CR SS 0 1 1 2	R <*
L						1A	<*
R		97.67	102.41			ARGL CLASTS PARTIALLY COMPOSED OF ARSI.	
/		101.26	102.12	0.86		X CGCP *C1 F* B* M01	R 2 BD
L						3A R* O L09	
/		102.12	102.41	0.29		X SAND SNX G; SS 2 3 2 6	R 3 BD U70 D-
L						2A // 7	
/		102.41	121.92	19.51		BRHM PR9	P <-
L						LN+	<.
/		102.41	121.92	19.51		3 SILT SI6 SS 2 3 3	R 2 BD <- D-
L						2A SN2 6	<.
R		102.41	121.92			THE SILTSONE OCCURS AS CLASTS WITHIN THE BRHM.	
/		118.20	121.92	3.72		X ARGL CR SS	R V) <- 8* <.
L						N	<.
R		118.20	121.92			SULPHIDES OCCUR IN QUARTZ AND BARITE VEINING.	
/		121.92	123.00	1.08		BRHM *C- LP9 M01	P <* C. 8*
L							
R		121.92	123.00			FEW AND SMALL CHERT CLASTS WITH ARGILLITE CLASTS UP TO 10CM.	
/	SHR	123.00	123.93	0.93		BRHM *C- LP9 GG=	P <* C. 8*
L							
R		123.00	123.93			INTERMITANTLY FRACTURED ROCK SUGGESTS SHEAR ZONE.	
/	SHR	123.93	124.97	1.04		BRHM *C- LP9 GG=	P <* C. 8*
L							
K	UM1	124.97	124.97	0.00			
/	LSX	124.97	125.97	1.00		LMSX SX BA CU5 SS //	P 1 BD 55 L2 L2 L)
L						TA PY	L+
R		124.97	125.97			CHERT CONTENT OF THIS INTERVAL IS UP TO 50%, REACHING SOMEWHAT	
R		124.97	125.97			HIGHER PERCENT IN LATTER PART OF INTERVAL. SPHALERITE HARD TO	
R		124.97	125.97			ESTIMATE. OCCURS AS CRYSTALS, LAMINATIONS (YELLOW) IN BARITE,	
R		124.97	125.97			AND DISSEMINATED IN BARITE, GIVING THE BARITE A YELLOW COLOR.	
/	LSY	125.40	125.58	0.18		X LMSX SX BA GG1 SS //	R 1 BD 55 L2 M3 L)
L							

K	F	FROM -	TO -	INT	RECOV	MD %	ROCK	TM	TM	OM1	TX	TX	F	C	%	M	ARG	RI	1	ID	AZM	DIP	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A 1	A 2
E	-L-	----.--	----.--	---.--	---.--	--	-	----	--	--	---	--	--	-	-	-	-	----	---	-	--	---	---	---	--	--	--	--	--	--	--	--	--	-	-
Y	G				R Q D	AGE	EV	RQ	LC	TM	OM2	TX	TX	S	C	O	O	CHT		2	ID	AZM	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA		
R		125.40	125.58					POSSIBLY A WEAK FAULT THROUGH THIS INTERVAL. THE LAMINATIONS																													
R		125.40	125.58					THROUGHOUT THIS PGI ARE MODERATELY CONVOLUTE, WITH ISOLATED																													
R		125.40	125.58					STRONG CONVOLUTIONS.																													
/	LSX	125.97	127.00	1.03				LMSX	SX	BA	GG3	SS	//					P	1	BD		85			L6		L3				L=			
L	WET								TA	PY	CH+																					L=			
R		125.97	127.00					INTERVAL EXTREMELY FRIABLE. FIRST PART OF INTERVAL IS FRAGMENTS																													
R		125.97	127.00					OF 5 - 7CM, BUT INCREASED BARITE IN LATTER PART PRODUCES																													
R		125.97	127.00					FRIABLILITY. CHERT OCCURS EARLY IN PGI.																													
/	LSX	127.00	129.11	2.11				LMSX	SX	BA	GG1	SS	//					P	1	BD		60			L3		L2				L=			
L									TA		CH3																					1			
/	LSX	127.40	127.65	0.25			X	LMSX	SX	BA	GG3	SS	//					R	1	BD		85			L3		L3				L=			
L											5																								
/	LSX	129.11	130.09	0.98				LMSX	SX	BA	GG8	SS	//					P	1	BD		87			L4		L2				L+			
L									TY	PY	CH3																					L1			
R		129.11	130.09					THE INTERVAL IS EXTREMELY BROKEN UP, BUT THIS MAY HAVE BEEN THE																													
R		129.11	130.09					RESULT OF DRILLING RATHER THAN FAULTING. COMPOSITION ESTIMATES																													
R		129.11	130.09					ARE DIFFICULT. MUCH HAS BEEN INFERRED FROM TWO COMPETENT CLASTS																													
/	LSX	130.09	131.06	0.97				LMSX	SX	BA	GG6	SS	//					P	1	BD		87			L4		L2				L+			
L																																			
/	LSX	131.06	132.18	1.12				LMSX	SX	BA	CH5	SS	//					P	1	BD		<+			L3		7*				L=			
L										BA	SF	GG7																					L1			
R		131.06	132.18					GALENA CONTENT BEGINS TO INCREASE AT THIS POINT. IT OCCURS IN																													
R		131.06	132.18					LAMINATIONS OF VERY FINE CRYSTALS. AGAIN THE SPHALERITE IS																													
R		131.06	132.18					DIFFICULT TO ESTIMATE. UNDER MAGNIFICATION, PATCHES OF WHITE																													
R		131.06	132.18					BARITE BLEND INTO PATCHES, WITH THE YELLOW COLOR DEEPENING AS																													
R		131.06	132.18					SPHALERITE CONTENT INCREASES.																													
/	LSX	132.18	133.20	1.02				LMSX	SX	BA	CH2	//	SS					P		BD		61			L4		L-		L2						
L										TA	SF	GG5																					L2			
R		132.18	133.20					BEDDING CONVOLUTIONS AND SLUMPING IS MINOR IN THIS INTERVAL. G-																													
R		132.18	133.20					SCALE ESTIMATES OF GALENA AND SPHALERITE ARE TOWARD THE LOWER																													
R		132.18	133.20					END OF THE SCALE INTERVAL.																													
/	LSX	133.20	134.32	1.12				LMSX	SX	BA	CH2	//	SS					P		BD		61			L4		L-		L1						
L											=																								
/	LSX	134.32	135.65	1.33				LMSX	SX	BA	CH2	//	SS					P		BD		61			L4		L-		L1						
L											+																								
/	LSX	135.65	136.38	0.73				LMSX	SX	BA	CH2	//	SS					P		BD		61			L4		L-		L2						
L																																			
/	LSX	136.38	137.33	0.95				LMSX	SX	BA	CH4	//	SS				MP1	P	1	BD		50			L4		L-		L1						
L										YA		0																					3			
R		136.38	137.33					THE FIRST HALF OF THIS INTERVAL IS DOMINATED BY A PIECE OF																													

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R O D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	QM2	TX TX	TX TX	F S	C C	% O	M D	ARG CHT	RI 1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		136.38	137.33																															
R		136.38	137.33																															
R		136.38	137.33																															
R		136.38	137.33																															
R		136.38	137.33																															
R		136.38	137.33																															
/	LSX	137.33	138.42	1.09				LMSX	SX	BA	CH2	//	SS						P		BD		50				L4		L1		L2		
L									TA		0																				1			
/	LSX	138.42	139.46	1.04				LMSX	SX	BA	CH2	//	SS						P		BD		50				L4		L1		L2		
L									TA		0																				L1			
R		138.42	139.46																															
/		139.46	140.46	1.00				LMSX	SX	BA	CH3	//	SS						P	1	BD		61				L3		L+		L2		
L									TA	SF																					L1			
R		139.46	140.46																															
R		139.46	140.46																															
R		139.46	140.46																															
R		139.46	140.46																															
R		139.46	140.46																															
/	LSX	140.46	141.86	1.40				LMSX	SX	BA	CH2	//	SS						P	1	BD		53				L3		L1		L2		
L									5A																						2			
R		140.46	141.86																															
R		140.46	141.86																															
R		140.46	141.86																															
/	LSX	141.86	143.37	1.51				LMSX	SX	BA	CH1	//	SS						P	1	BD		61				L2		L2		L2		
L									3A		GG2																				2			
R		141.86	143.37																															
R		141.86	143.37																															
R		141.86	143.37																															
R		141.86	143.37																															
/	LSX	143.37	144.77	1.40				LMSX	SX	BA	CH1	//	SS						P	1	BD		55				L1		L4		L2		
L									UA																						1			
R		143.37	144.77																															
R		143.37	144.77																															
R		143.37	144.77																															
R		143.37	144.77																															
/	LSX	144.77	145.39	0.62				LMSX	SX	BA	CH1	//	SS						P	1	BD		70				L1		L4		L2		
L									UA																						1			
/	LSX	145.39	146.39	1.00				LMSX	SX	BA	CH1	//	SS						P	1	BD		70				L2		L4		L2		
L									UA																						2			
/	LSX	146.39	147.50	1.11				LMSX	SX	BA	CH1	//	SS						P	1	BD		63				L2		M6		L1		
L																															1			

K E Y	F -L-	FROM ----.--	- TO - ----.--	INT ---.--	RECOV ---.--	MD % ROCK TM TM QM1 TX TX F C % M ARG RQD AGE EV RQ LC TM QM2 TX TX S C O O CHT	RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY A 1 A 2 2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA
R		146.39	147.50			LAST HALF OF INTERVAL IS ALMOST ENTIRELY MASSIVE, VUGGY PYRITE	
R		146.39	147.50			LAMINATIONS ARE NOT EASILY DISTINGUISHED IN THE PYRITE, BUT ARE	
R		146.39	147.50			NOTICEABLE CONVOLUTE IN THE SULPHIDE-SULPHATE.	
/	LSX	147.50	148.44	0.94		LMSX SX BA CH= // SS	P 1 BD 65 L6 L1 L1
L						AM	
/	LSX	148.44	149.42	0.98		LMSX SX BA CH1 // SS	P 1 BD 65 L4 L1 L1
L						UA	L1
/	LSX	148.44	149.42	0.98	2	ARGL SF	R <*
L						2A	
R		148.44	149.42			THE CHERTY ARGILLITE SEEMS CONFORMABLE WITH BEDDING IMMEDIATELY	
R		148.44	149.42			ABOVE, BUT BEDDING IS DISTURBED BELOW WITH PLASTIC DEFORMATION	
R		148.44	149.42			OF BARITE. DISTINCT WHITE SPHALERITE POOR CHERTY BARITE PATCHES	
R		148.44	149.42			ABRUPTLY CHANGE TO CHERT POOR, SPHALERITE RICH, YELLOW BARITE.	
R		148.44	149.42			LAMINATIONS ARE CONTINUOUS BETWEEN THE SEPARATE AREAS.	
/	LSX	149.42	150.41	0.99		LMSX SX BA CH2 // SS	P 1 BD 62 L3 L1 L1
L						TA	2
/	LSX	150.41	151.49	1.08		LMSX SX BA CH2 // SS	P 1 BD 62 L3 L1 L1
L						TA	2
/		150.41	151.49	1.08	1	ARGL SF	R <* <3
L						1A	
R		150.41	151.49			THE CHERTY ARGILLITE MAY BE A FRAGMENT 30CM LONG. IT IS HIGHLY	
R		150.41	151.49			FRACTURED WITH PYRITE VEINING.	
/	LSX	151.49	152.80	1.31		LMSX SX BA CH2 // SS	P 1 BD 55 L2 L1 L2
L							2
/		151.49	152.80	1.31	1	ARSI SF SI1 SS 0 1 1	R 2 BD 55 >1 >3
L						1A	
/	LSX	151.62	151.73	0.11	X	LMSX SX BA CH1 // SS	R 1 BD 65 L1 L8 L=
L							1
R		151.62	151.73			THIS IS THE FINAL INTERVAL OF THE ORE ZONE THE LAMINATIONS ARE	
R		151.62	151.73			VERY REGULAR, AND SHOW LITTLE TECTONIC OR SOFT SEDIMENT	
R		151.62	151.73			DEFORMATION. THE ARGILLITE IS AT THE BOTTOM OF THE INTERVAL.	
R		151.62	151.73			MINOR INTERBEDDING OCCURS WITH 3.5CM OF ARSI SEPARATED FROM THE	
R		151.62	151.73			BULK OF THE ARSI BY 8.5CM OF LMSX. THE PYRITE MACROVEINING CUTS	
R		151.62	151.73			BOTH THE SILT AND THE SULPHIDE LAMINATIONS. ASSOCIATED WITH THE	
R		151.62	151.73			PYRITE IS BARI\E WHICH FORMS THE CENTRAL PART OF SOME OF THE	
R		151.62	151.73			VEINS.	
R		152.80	153.22			A PYRITE MACROVEIN WITH BARITE OCCURS AT THE CONTACT BETWEEN THE	
R		152.80	153.22			BRHT AND ARSI. IT CONTAINS FRAGMENTS OF ARGL BRECCIA, AND	
R		152.80	153.22			MICROVEINS EXTEND INTO THE ARSI, BUT NOT INTO THE BRHT.	
K	LM1	152.80	152.80	0.00			
/	CON	152.80	153.83	1.03		BRHT *C) ST B* LP3 P <) B*	
L						2A F* R* KM7	

K E Y	F -L- G	F R O M -	T O -	I N T	RECOV RQD	MD % AGE	ROCK EV	TM RQ	TM LC	GM1 GM2	TX TX	TX TX	F S	C C	% U	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		152.80	153.22	0.42			X			ARSI								R	2	BD		55					<*		7)				
L									1A																								
R		152.80	153.83		SEEMS CONFORMABLE WITH ARSI IMMEDIATELY UPHOLE.																													
/	SHR	153.83	154.89	1.06						BRHT		*C) ST B*					LP3	P					>+						B+				
L																																	
R		153.83	154.89		LARGE QUARTZ VEIN WITH A MULTITUDE OF PYRITE VEINS MAY BE																													
R		153.83	154.89		FILLING OF A SHEAR.																													
/	CON	154.75	154.89	0.14			X			CGCP		*C1 F* B*					MO1	R		CN							<=		7)				
L									3A								MO9														<?		
R		154.75	154.89		YELLOW STAINING OF BARITE POSSIBLY SPHALERITE.																													
/		154.89	155.89	1.00						CGCP		*C1 F* B*					MO1	P										<=		7)				
L									3A								MO9														<?		
R		154.89	155.89		RECURRENCE OF YELLOW STAINED BARITE.																													
/		155.89	156.89	1.00						CGCP		*C1 F* B*					MO2	P										6)		6+				
L																	8														00		
/		156.89	158.21	1.32						CGCP		*C1 F* B*					MO2	P										6)		6+				
L																	P8														00		
/		158.21	162.80	4.59						CGCP		*C1 F* B*					MP1	P										<=		7)				
L																	P																
/	CON	162.80	164.15	1.35						SAND		G; MX 3 4 3 6						P				D						<.		7)				
L																	7																
R		162.80	164.15		CONTACT WITH CGCP IS GRADATIONAL.																													
/		163.50	164.15	0.65			X			BRHT		*C1 B* F*					MP4	R										<=		6)				
L														P*			KN6																
R		163.50	164.15		GRADATIONAL CONTACT BETWEEN THE SAND AND BRHT.																													
/		164.15	165.30	1.15						ARSI	SF	SF- SS // 0 1 2						P	2	BD		60	<=						8*				
L									1A																								
R		164.15	165.30		MAY BE A LARGE FRAGMENT, THOUGH CONTACT CONFORMS TO BEDDING.																													
/		164.66	164.80	0.14			X			BRHT		*C+ R* F*					MP4	R												D)				
L									2A			H*					KM6																
/		165.25	165.30	0.05			X			BRHT		*C. R* F*					MO3	R												B3				
L									2A								LN7																
R		165.25	165.30		SEEMS LIKE INJECTION ALONG CONTACT.																													
/	CON	165.30	168.25	2.95						ARGL	CR	SF SF= SS // 0 1 2						P	2	BD		59	<*		B.		L)						
L											N	SI= FR																						
/		166.58	167.18	0.60			X			ARGL	00	00 000 SS // 0 1 2						R	2	BD		59	<*		B.		L)						
L									1A			SI1 00																						

K E Y	F -L- G	F R O M -	T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX TX	TX TX	F S	C C	% O	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		167.46	167.64	0.18			X	ARGL	CR N	SF SI=	SF= FR	SS	//	0	1	2		R	2	BD		59	<1				B.		L+					
L																																		
R		167.46	167.64		STOCKWORK-LIKE QUARTZ VEINING.																															

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6B02

DRILLHOLE/TRAVERSE :81-DH077	COLLAR ELEVATION: 1235.53	AZIMUTH(DEG) : 18.00	GEOLOGGED BY : HDG +
TOTAL DEPTH/LENGTH : 298.09	NORTHING(- IF S): 7002472.00	VERTICAL ANGLE : -76.00	DATE (YY/MM/DD): 810708
CORE/HOLE DIAMETER : HQNQ	EASTING (- IF W): 436719.94	CO-ORD SYSTEM : UTM	PROJECT NUMBER : J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	19.81	23.00	-72.25
2	36.57	28.00	-69.75
3	57.91	32.00	-67.25
4	72.54	34.00	-65.50
5	88.70	35.00	-65.00
6	106.68	37.00	-62.50
7	118.87	37.00	-62.00
8	128.00	38.00	-61.50
9	146.30	38.00	-61.50
10	160.93	38.00	-60.50
11	174.34	39.00	-60.00
12	198.12	41.00	-57.25
13	220.07	41.00	-55.00
14	235.00	46.00	-52.75
15	249.00	45.00	-52.00
16	264.26	47.00	-50.00
17	279.50	48.00	-49.00
18	294.74	46.00	-48.00

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   F   - I N T E R V A L -    CORE  T- %       TYPI- QAL  TEX-  GRAIN        PGI   STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS SUMMARY
K  L (UNITS =    .  DEC.PLACE)RECOV-  M M ROCK FYING MIN TURES CHARACS                       H  H  H  H  H ANY H  H  H ANY  ALT ORE
E  A  (MT=METRIC FT=FOOTRIC)  ERY    U I      TM TM MAT TX TX F C % M ARG  /RI T ID STK DIP  A  A  A  A  A MIN A  A  A MIN - - - -
Y  G  F R O M - T O -  I N T ( . )  D X TYPE  1  2 QM1  1  2 F F C A          1    AZM  RT QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
- --- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                          ROCK   FM     RT    TM QM2 TX TX S C O O CHT      T ID STK DIP MG MU CL SD QS HA PR MT SL HA
E  L                          QUAL   AGE EN- Q LC- 3      3  4 O     /          2    AZM  RT H  H  H  H  H  H  H  H  H  H   1   1
Y  G                          DESIG      VIR   COL            R     C            STRUCTUR-2  A  A  A  A  A  A  A  A  A  A    2   2

R SVY    0.00    0.00      SPERRY-SUN SINGLE-SHOT RESULTS.
R SVY  175.87  175.87      CLAPISON WEDGE FULL STEEPENING, WEDGE NO GOOD.
R SVY  180.75  180.75      CLAPISON WEDGE FULL STEEPENING.
R SVY  202.08  202.08      CLAPISON WEDGE FULL STEEPENING.
R SVY  220.07  220.07      CLAPISON WEDGE FULL AZIMUTH RIGHT.

/ OVB    0.00    3.95   3.95            OVER                                P
L

/        3.95   11.02   7.07            BRPM       *S*                MP6   P                                  D)
L                                          2A              2   *   KN=
R        3.95   11.02      ARGILLITE FILLS THE PEBBLY MUDSTONE MATRIX.

/       11.02   23.30  12.26            BRHM CB        SC             NR9   P                                  B)
L                                          3               4
```

K E Y	F -L- G	FROM	TO	INT	RECOV RQD	MD % AGE	ROCK EV	TM RO	TM LC	TM QM1 QM2	TX TX	TX TX	F S	C C	% O	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		23.30	62.80	39.50			ARSI	CR		SN1	SC	BD	1	3	1	3		P	1	BD		54									L)	
L								3A		SI+		X8	8																			
/		62.80	67.29	4.49			BRHT			*S*							MP6	P													R)	
L								3A		*C*	R*	B*	2		1		LN1															
R		62.80	67.29		THE HETEROGENOUS BRECCIA HAS A BEDDLY MUDSTONE MATRIX.																													
/		67.29	69.19	1.90			BRHT			*C.							LP6	P													R)	
L								4A			R*		3				LN2															
/		67.29	67.79	0.50		7	CGCP			*C.							LN2	R													R)	
L								5A			R*		4		C		LM6															
R		67.29	67.79		FROM THE CHERT PEBBLE CONGLOMERATE TO THE HETEROGENEOUS BRECCIA																													
R		67.29	67.79		THERE IS A TRANSITIONAL CHANGE. THIS INVOLVES AN INCREASE IN																													
R		67.29	67.79		THE NUMBER OF SILTY ARGILLITES. BOTH INTERVALS HAVE A SANDY																													
R		67.29	67.79		MATRIX WITH A CLOSED FRAMEWORK, HOWEVER THE HETEROGENEOUS																													
R		67.29	67.79		BRECCIA DOES BECOME MORE OPEN IN THE LAST 20CMS.																													
/		69.19	70.90	1.71			SAND			SN7	G;	BD	1	3	9	6		P	2	BD		U65	V=								D*	
L								8A					7			0											B*					
/		69.19	70.90	1.71		3	CGCP			*C)	G;	BD					LO1	R	2	BD		U65	V=								D*	
L								7A								C	LO4															
R		69.19	70.90		THE CONGLOMERATE IS INTERBEDDED WITH THE SANDSTONE, AS NORMALLY																													
R		69.19	70.90		GRADED INTERVALS WHICH PROGRESS FROM COARSE CHERT FRAGMENTS TO																													
R		69.19	70.90		FINE SANDSTONES. THESE CYCLES ARE REPEATED AT LEAST 5 TIMES																													
R		69.19	70.90		THROUGH THE TOTAL INTERVAL.																													
/		70.90	83.03	12.13			BRHT			*S*		F*					NS3	P													R*	
L								3A		*C)	R*	R*	2				LP2															
R		70.90	83.03		THE BRECCIA IS MAINLY COMPOSED OF SILTY ARGILLIC AND CHERTY																													
R		70.90	83.03		FRAGMENT WITHIN A PEBBLY MUDSTONE MATRIX. THE SIZE AND																													
R		70.90	83.03		FREQUENCY OF SILTY ARGILLIC FRAGMENTS DECREASES GOING DOWNHOLE																													
R		70.90	83.03		UNTIL THE ROCK TYPE CHANGES TO A PEBBLY MUDSTONE.																													
/		83.03	90.61	7.58			BRPM			*S+		F*					M02	P													R)	
L								3A		*C)	R*	B*	2		+	0	K02															
/		90.61	92.36	1.75			SAND			SN9	MX		3	3	9	4		P					<)								D*	
L								5A					8																			
/		91.01	91.20	0.19		7	BRPM			*C*							K01	R													R+	
L								4A		SN7		F*	3			0	KN2															
R		91.01	91.20		THIS INTERVAL HAS A SANDSTONE MATRIX. IT APPEARS AS A LARGE																													
R		91.01	91.20		LENSE WITHIN THE SANDSTONE, RATHER THAN AN INTERBED.																													
/		92.36	96.82	4.46			CGBR			*C+		F*					J02	P						V+								R)	
L								5A			8*	R*	3		C		K03										B*					
R		92.36	96.82		CHERT CLASTS ARE MODERATELY ROUNDED TO INTERMEDIATE. THE MATRIX																													
R		92.36	96.82		IS MADE UP OF SAND SIZED PARTICLES, GRADING INTO CLAY NEAR THE																													

K E Y	F -L-	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RG	TM GM1 LC	TX TM	TX GM2	F TX	C TX	% S	M C	ARG O	RI CHT	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		92.36	96.82						BASE. THIN 3CM BEDS OF SANDSTONE, WITH THE OCCASIONAL BRECCIA																								
R		92.36	96.82						FRAGMENT, INTERBED WITH THE CONGLOMERATE AND ACCOUNT FOR ABOUT																								
R		92.36	96.82						5% OF THE TOTAL INTERVAL VOLUME. SMALL, LIGHT YELLOW, SIDERITE																								
R		92.36	96.82						BLEBS ARE FOUND IN THE QUARTZ VEINS.																								
/		96.82	99.64	2.82			BRPM		*C)								LP2	P													D*		
L								3A		F*	B*	1	*		0	KO2																
/		99.64	103.50	3.86			BRHT		*C)		R*						LR4	P													R*		
L								3A		F*		2	)			LO2																
R		99.64	103.50		THE ARGILLITE CLASTS BECOME SMALLER NEAR THE BOTTOM OF THIS																												
R		99.64	103.50		INTERVAL.																												
/		103.50	116.95	13.45			BRPM		*C=		B*						LQ2	P													D(		
L								5A		F*		3			0	LO2														<		
/		113.00	116.95	3.95		X	BRPM										R						<+									
L																																
R		113.00	116.95		THE ROCK IS HIGHLY BROKEN DUE TO POSSIBLE FAULTING.																												
/		116.95	119.18	2.23			BRHT		*S)								LQ5	P													D)		
L								2A				2				KM1							<+									
/		119.18	130.76	11.58			BRPM		*S)		G:						LR2	P					<)								R+		
L								4A		*C+	R*	B*	3	)	0	KN2																
R		119.18	130.76		THE MATRIX IS SANDSTONE. THIS INTERVAL IS BROKEN AND MILDLY																												
R		119.18	130.76		CHEARED WITH QUARTZ-PYRITE VEINS CUTTING THROUGH THE MATRIX AND																												
R		119.18	130.76		BRECCIA FRAGMENTS. VEINING IS THEREFORE POST SEDIMENT																												
R		119.18	130.76		LITHIFICATION.																												
/		119.74	121.41	1.67		7	BRHT		*C)		R*						LP6	R													R+		
L								3A				2				KN1								V+								
/		130.76	139.29	8.53			BRHM	CR	GG1								LR8	P		FO		42	<+								<+		
L								2A								JL+																
/		139.29	150.12	10.83			CGBR		*C)		G;						LQ2	P					<)										
L								5A			F*				C	KQ4								<+								
R		139.29	150.12		THE CHERT FRAGMENTS APPEAR MODERATELY ANGULAR TO INTERMEDIATE.																												
/		142.34	143.86	1.52		9	SAND		SN9		G;	0	3	9	4		R	1	BD		U45	<+										
L								5A		BD	//	8																					
/		147.90	148.64	0.74		8	SAND		SN8		G;	0	3	9	5		R	2	BD		U38									B+		
L								5A		BD	//	8																					
/	SHR	150.12	160.02	9.90			BRHM	CR									MQ8	P													D+		
L								2A					2			JK=																
R		150.12	160.02		THIS IS A HOMOGENEOUS WITH A PEBBLY MUDSTONE MATRIX.																												
/	FLT	160.02	169.58	9.56			BRHT	CR	*S+		SS						LQ6	P													D+		
L								2A			CC	2		+		KM1							<+									

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV RQD	MD % AGE	ROCK EV	TM LC	TM TM QM1 QM2	TX TX	F S	C C	% O O	M CHT	ARG	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/	SHR	163.68	165.81	2.13			7 SAND			LC	DB	0	3	9	S	R				V=						D+				
L								5A					8																	
/		169.58	193.55	23.97			BRHT		*C+		B*				NR5	P		0	LM							R+				
L								3A			R*	CC	2		LP2									<*						
/		179.53	193.55	14.02			5 ARGL	CR			MX		0	1	+	5	R	0	LM		38	<*				D+				
L								1A			LM	SS	9																	
R		179.53	193.55		THE CARBONACEOUS ARGILLITE BEDS, WITHIN THE HETEROGENEOUS																											
R		179.53	193.55		BRECCIA, ARE FROM .2 TO 2.5 METRES IN WIDTH. THE HETEROGENEOUS																											
R		179.53	193.55		FRAGMENTS ARE SILTY ARGILLITE AND CHERT. THE MASSIVE																											
R		179.53	193.55		CARBONACEOUS ARGILLIC INTERVALS WERE CLASSIFIED AS TRUE																											
R		179.53	193.55		INTERBEDS ON THE BASIS OF CONTANT LAMINATION ANGLES AND																											
R		179.53	193.55		CONFORMABLE LOWER CONTACTS.																											
/		193.55	199.02	5.47			ARGL	CR			MX		0	2	+	5	P	0	LM		45	<(				L=				
L								1A			LM		9																	
/		196.35	196.60	0.25			8 SAND			SN5		0	3	5	3	R				L5						D=				
L								7A			LC	8																		
R		196.35	196.60		A LARGE 10CM., SILICIFIED SANDSTONE OCCURS ABOVE A 9CM., MASSIVE																											
R		196.35	196.60		SANDSTONE. THIS SILICIFIED UNIT HAS BEEN CONSIDERABLY ALTERED																											
R		196.35	196.60		BY THE STOCKWORK VEINING.																											
/		199.02	200.71	1.69			BRPM				G;				LO2	P										R+				
L								2A					3		0	KM2														
/		200.71	202.08	1.37			BRHT		*C=		G:				LP3	P										R+				
L								4A		F*	R*	3			C	KO3														
R		200.71	202.08		THE BOTTOM GRADES INTO A COARSE GRIT (REVERSE GRADING).																											
/		202.08	206.14	4.06			ARGL	CR		MX	LM	0	1	=	1	P	0	LM		47						L=				
L								1A		//		9																		
/		204.83	206.14	1.31		5	BRHM	CR							KN5	R										R+				
L								1A					2		JM=															
R		206.14	206.74		THIS SANDSTONE CONTAINS CARBONACEOUS ARGILLITE WITHIN THE																											
R		206.14	206.74		INTERSTITIAL SPACES. NORMAL GRADING OF THE SANDSTONE INDICATES																											
R		206.14	206.74		THAT TOPS ARE UPHOLE.																											
/		206.14	224.64	18.50			BRHT		*C=		G;				MU4	P										R+				
L								4A		R*	F*	2			LP3															
/		206.14	206.74	0.60			7 SAND			SN8	G;		0	3	8	5	R										D=			
L								5A			MX	8																		
R		206.14	224.64		GRADING OF BOTH SILTY ARGILLITE AND CHERT FRAGMENT OCCURS IN																											
R		206.14	224.64		THIS INTERVAL. THE CHERT EVENTUALLY GRADES INTO A SANDSTONE AT																											
R		206.14	224.64		THE TOP OF THE HETEROLITHIC BRECCIA.																											
/		220.07	221.59	1.52			X LOST									R														
L																														

K E Y	F -L-	FROM -	TO -	INT	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX	TX	F S	C C	% O O	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		224.64	227.32	2.68			ARGL	CR		SN+			0	3	+	1		P		LM		45								L+		
L								1A			LM	9																					
R		224.64	227.32	THE ARGILLITE INTERVAL MAY REPRESENT A LARGE ARGILLITE FRAGMENT.																														
/		227.32	232.70	5.38			BRHT			*S(	G;						MR3	P												R+		
L								4A		*C=	R*	F*			(		L03															
/		232.70	245.82	13.12			ARGL	CR		SN+	MX		0	2	)			P	0	LM		50								L+		
L								1A			LM																						
/		244.74	244.84	0.10		8	BRHT	CR									JJ2	R												R2		
L								2A					7																				
/		245.82	259.40	13.58			ARGL	CR		SN+	MX		0	2	)	2		P	0	LM		47					L(			L=		
L								N		GG*		LM																					
/		247.89	248.15	0.26		4	SAND			S97	LM	//	0	2	7	3		R		LM		52								L2		
L								4Y					7																				
/		254.82	259.40	4.58		2	BRHT			*C=		R*					MN7	R												R=		
L								1A		*S)	B*		2		)		KM2															
R		254.82	259.40	THE HETEROLIGHIC BRECCIA OCCURS IN TWO PLACES, AS A 50CM AND A																														
R		254.82	259.40	20CM. INTERBED WITHIN THE ARGILLITE.																														
/		259.40	277.00	17.60			ARSI			SN1		BD	0	2	1	3		P	1												D+		
L								2A			//	G;	8																				
R		259.40	277.00	AT 274.89 METRES, A SMALL 1CM PYRITE BAND OCCURS.																														
/	SHR	277.00	278.20	1.20			ARSN	CR		SN3	BD	//	0	3	5	3		P	1	BD		43					<)		L+		D.		
L								1A		S12			8																			D.		
R		277.00	278.20	BARITIC MICROVEINS OCCUR IN AREAS OF BROKEN, FRACTURED ROCK.																														
/		278.20	280.20	2.00			BRHT	SF		*C+							KM3	P										<=					
L								4A			H*	R*	3				JL2											<)		R+		<*	
R		278.20	280.20	SPHALERITE IS FOUND IN SMALL QUARTZ MICROVEINS, AND AS A																														
R		278.20	280.20	REPLACEMENT MINERAL IN CHERT FRAGMENTS. THESE FRAGMENTS ARE																														
R		278.20	280.20	MODERATELY ANGULAR. THE WHOLE INTERVAL IS HEAVILY BROKEN AND																														
R		278.20	280.20	VEINED.																														
K	UM1	280.20	280.20	0.00																														
/	LSX	280.20	281.15	0.95			LMSX	SF			LM	LC						P	0	LM		43	L4							L=		
L								8Y			SS	BR																			L2	L3	
R		280.20	281.15	THE SPHALERITE IS YELLOW AND ALTERNATES IN THINLY LAMINATED																														
R		280.20	281.15	LAYERS WITH MARCASITE, QUARTZ AND GALENA. SILICIFIED ARGILLITE																														
R		280.20	281.15	BEDS, 1CM IN THICKNESS, INTERCALATE WITH THE LAMINATED SULPHIDE.																														
/		281.15	281.53	0.38			FGSX					SS						P					#4							#+		
L								4A			BR																				#2	#1	
R		281.15	281.53	SILICIFIED ARGILLITED AND LAMINATED SULPHIDES ARE CONVOLUTED TO																														

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K  F  F R O M - T O -  I N T RECOV  MD % ROCK TM TM QM1 TX TX F C % M ARG   RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
E -L- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
Y  G                         R Q D  AGE EV RQ LC TM QM2 TX TX S C O O CHT      2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA

R       281.15  281.53      THE POINT OF BRECCIATION.  MICRO-QUARTZ VEINS CONTAIN LARGE
R       281.15  281.53      YELLOW SPHALERITE CRYSTALS.

/       281.53  282.34   0.81            LMSX SF        LM LC                P  0 LM      37 L4                          L=
L                                            8Y        SS BR                                                      L2 L3
R       281.53  282.34      A HIGHLY WEATHER BAND OF DIRTY, SOFT SULPHIDE RICH ARGILLITE
R       281.53  282.34      INTERCALATES AT 281.94 METRES, WITH THE LAMINATED SULPHIDE.

/       282.34  282.97   0.63            LMSX SF        LC BR                P  0 LM      37 L4                          L=
L                                                       LM
R       282.34  282.97      THE TOP AND BOTTOM 10CMS OF THIS LAMINATED SULPHIDE CONSISTS OF
R       282.34  282.97      BRECCIATED FRAGMENTS OF LAMINATED SULPHIDE AND ARGILLITE IN AN
R       282.34  282.97      ARGILLIC MATRIX.

/       282.97  283.81   0.84            FGSX              SS                 P                #5                          #1
L                                            4A            BR                                                      M3 #2
R       282.97  283.81      THE FRAGMENTED, LAMINATED SULPHIDE FRAGMENTS RANGE FROM 3 TO 5
R       282.97  283.81      CMS IN DIAMETER.  DARK BLACK, CARBONACEOUS ARGILLITE FRAGMENTS
R       282.97  283.81      RANGE FROM .5 - 2CMS IN DIAMETER.  THE ANGULARITY AND
R       282.97  283.81      PRESERVATION OF REMNANT BEDDING INDICATES THAT THE FRAGMENTS
R       282.97  283.81      HAVE BEEN DISPLAYED VERY LITTLE FROM THEIR ORIGINAL BEDDING.
R       282.97  283.81      THE MATRIX IS A DARK GREY, SILTY ARGILLITE WHICH IS PROBABLY
R       282.97  283.81      SULPHIDE RICH.  THIS UNIT BECOMES PROGRESSIVELY RICHER IN
R       282.97  283.81      MASSIVE MARCASITE.

/       283.81  284.61   0.80            LMSX           LM LC                P  0 LM      57 L4          <*              L=
L                                            8O            BR                                                      M3 L3
R       283.81  284.61      THE MARCASITE OCCURS AS BOTH FINE LAMINATIONS, AND AS MASSIVE
R       283.81  284.61      BLOCKS OF SULPHIDE WITH DISSEMINATED GALENA.  ARGILLITE BED ARE
R       283.81  284.61      FROM TO .5 - 5CMS THICK, AND BRECCIATED WHERE LAMINATED
R       283.81  284.61      SULPHIDES UNDER GO INTENSE DEFORMATION.

/       284.61  284.99   0.38            LMSX           LM LC                P  0 LM      57 L4          <*              L=
L                                                                                                                  L1
R       284.61  284.99      ARGILLIC INTERBEDS ARE AS THICK AS 15CMS AND ACCOUNT FOR 30% BY
R       284.61  284.99      VOLUME, OF THE TOTAL INTERVAL.

/       284.99  286.21   1.22            ARGL CR        LM LC 0 1   1        P                L2          <*              L)
L                                            1A            BR 9                                                      M2 L1
R       284.99  286.21      LAMINATED SULPHIDES INTERBED WITH THE ARGILLITE.  SULPHIDE BEDS
R       284.99  286.21      ARE FROM 1 - 10CMS.  IN THICKNESS AND ACCOUNT FOR 40% OF THE
R       284.99  286.21      TOTAL ROCK INTERVAL.

K LM1   286.21  286.21   0.00

/       286.21  287.30   1.09            SILT       SI5 LM    0 2 6 2        P  1 LM      52 <)          <+    D+
L                                            3A               9                                                      B)

/       287.30  289.46   2.16            SILT       SI5 LM    0 2 6 2        P  1 LM      52 <)          <+    L=
L                                            3A               9                                                      B)

/       289.46  292.73   3.27            ARGL CR        MX    1 1   1        P    LM      50             <+    L=
L                                             N            LM 9
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K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	TM QM1 QM2	TX	TX	F S	C	% O	M O	ARG CHT	RI	1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		292.73	294.44	1.71			CGSN	PY									LP4	P											R1					
L								SA					2				JM4																	
/		294.44	298.09	3.65			ARGL	CR		MX			1	1		1		P		LM		45							D+					
L								PA			LM	9																						

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6B02

DRILLHOLE/TRAVERSE :81-DH078	COLLAR ELEVATION: 1296.37	AZIMUTH(DEG) : 355.00	GEOLOGGED BY : JER +
TOTAL DEPTH/LENGTH : 428.55	NORTHING(- IF S): 7002568.00	VERTICAL ANGLE : -83.00	DATE (YY/MM/DD): 810901
CORE/HOLE DIAMETER : HQNQ	EASTING (- IF W): 436555.31	CO-ORD SYSTEM : UTM	PROJECT NUMBER : J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	27.43	0.00	-81.50
2	88.39	5.00	-81.25
3	118.26	6.00	-81.25
4	146.30	12.00	-81.25
5	175.87	12.00	-81.00
6	206.35	13.00	-81.00
7	230.43	16.00	-81.50
8	263.35	24.00	-80.50
9	295.66	24.00	-80.50
10	322.78	25.00	-80.50
11	342.90	24.00	-80.25
12	355.09	25.00	-80.25
13	367.28	26.00	-80.00
14	374.09	26.00	-80.25
15	391.66	24.00	-80.25
16	403.86	25.00	-80.25
17	416.52	24.00	-80.00
18	428.24	27.00	-80.00

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   F   - I N T E R V A L -    CORE  T- %      TYPI- QAL  TEX-  GRAIN        PGI   STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS SUMMARY
K  L (UNITS =    .  DEC.PLACE)RECOV-  M M ROCK FYING MIN TURES CHARACS                       H  H  H  H  H ANY H  H  H ANY  ALT ORE
E  A  (MT=METRIC FT=FOOTRIC)  ERY    O I      TM TM MAT TX TX F C % M ARG  /RI T ID STK DIP  A  A  A  A  A MIN A  A  A MIN - - - -
Y  G  F R O M - T O -  I N T ( . )  D X TYPE  1  2 QM1  1  2 F F C A          1    AZM  RT QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
- --- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                          ROCK   FM     RT    TM QM2 TX TX S C O O CHT      T ID STK DIP MG MU CL SD QS HA PR MT SL HA
E  L                          QUAL   AGE EN- Q LC- 3      3  4 O     /          2    AZM  RT H  H  H  H  H  H  H  H  H  H   1   1
Y  G                          DESIG      VIR   COL             R     C            STRUCTUR-2  A  A  A  A  A  A  A  A  A  A     2   2

R SVY   27.43  428.55      ALL DATA FROM SPERRY SUN.  NO WEDGES WERE SET ON THIS HOLE.

/ OVB    0.00    3.32   3.32            OVER                                P
L

/ WET    3.32    9.05   5.73            ARGL        SI+ SS SC 0 1   1       P                                D.
L                                          1A

/ WET    3.32    9.05   5.73          3 SAND        SN9 SC MX 3 4 4 5       R                                D.
L                                          2A          FU

/ WET    3.32    9.05   5.73          2 CGCP        *C= F* B*         NL3   R                <*              D.
L                                          3A                      0 OK7

/ WET    3.32    9.05   5.73          1 BRHT        SI+               NO8   R                                D.
L                                          1A                        LO2
```

K E Y	F -L-	F G	FROM ----.--	TO ----.--	INT ---.--	RECOV R Q D	MD % AGE	ROCK FV	TM RQ	TM LC	QM1 TM	QM2	TX TX	TX TX	F S	C C	% O O	M O	ARG CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/	WET		9.05	16.70	7.65			CGCP			*C+		F*	B*					LO6	P														D.	
L									2A				R*					0	LO4																
/	WET		16.70	18.92	2.22			CGCP											LN4	P														D.	
L									2A									0	LO6																
/	WET		16.70	18.92	2.22		4	BRHT			H*		F*						NP8	R														D.	
L									1A		B*				*				LO2																
/	WET		18.92	24.38	5.46			BRHM	CR										OSX	P														D.	
L									1A								C																		
R			18.92	24.38	UNIT GENERALLY HAS CLOSED STRUCTURE, WITH A MATRIX OF BRPM.																																
/	WET		18.92	24.38	5.46		1	BRHT			H*								NO9	R														D.	
L									1A									0	LN=																
/	WET		18.92	24.38	5.46		1	BRPM								0	1	9	1	R														D.	
L									1A										LM+																
R	EDT		18.92	24.38	INTERVAL CORRECTED TO MATCH WITH ABOVE.																																
/	WET		24.24	24.38	0.14		X	FAUL			GGS									R														D*	
L									VA																										
/	WET		24.38	30.50	6.12			BRHT			*C=		FU F*						NO7	P														D*	
L									2A				B* R*						MP3																
/	WET		30.50	41.75	11.25			ARGL			SI5	SS	SC	0	1		2			P	2	BD		86										L*	
L									1A																										
/	WET		41.75	57.00	15.25			BRHT			*C+		R* F*						QS7	P														D*	
L									2A				B*					C	MP3																
/	WET		45.70	54.86	9.16		X	BRHM			*C*		H* R*						NQ9	R														D-	
L									1A				F* B*					C	MO+																
/			57.00	62.79	5.79			ARGL												P														D-	
L									1A																										
/			61.35	61.60	0.25		X	BRHM												R														D)	
L									1A																										
/	FLT		62.30	62.79	0.49		X	FAUL			GG2									R				#)										D)	
L									1A																										
R			62.79	63.30	YELLOW COLOUR OF BARITE VEIN INDICATES POSSIBLE SPHALERITE.																																
/			62.79	65.56	2.77			SAND	SL		CB=	G;		3	4	4	6		P	3	BD		U75										B*	
L									3A					5											C.								B.	
/			62.79	63.30	0.51		X	BRHT	BA	SL	*C1		F* B*						MQ3	R				V1										<*	
L									3A				R*						LN7															<?	

K E Y	F -L-	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	TM QM1 QM2	TX CB+	TX F* B* R*	F C S	% C O	M O O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		62.79	65.56	2.77			1 SAND	SL		*C=	F*	B*				LN3	R										B*				
L									3A		R*	H*				M07													B.		
/		65.56	80.60	15.04			BRHT			*C1	F*	B*				NR3	P					V*					B)				
L											R*			.	O	MP7															
R		65.56	80.60		SOME ARGL FRAGMENTS SHOW PRIMARY QUARTZ VEINING.																											
R		65.56	80.60		MINOR SAND FGT.																											
/		79.59	80.60	1.01			X BRHT			*C1	F*	B*				LP7	R					00					B*				
L									2A							LO3															
/		80.60	133.22	52.62			BRHM				R*	F*				NS9	P					<.			C.		B*				
L									1A	CR	B*				O	K01							C.								
/	SHR	84.70	85.30	0.60			X FAUL			GG1							R														
L									1A																						
/	FAL	94.36	95.40	1.04			X FAUL			GG3							R														
L									1A																						
/	FLT	96.84	96.93	0.09			X FAUL			GG2							R														
L									1A																						
/	FLT	98.90	99.06	0.16			X FAUL			GG2							R														
L									1A																						
/		106.63	109.42	2.79			X BRHT			*C2	F*	B*				MQ4	R										B*				
L									2A		CB+	R*				LP6															
R		106.63	109.42		GRADATIONAL BOUNDARIES INDICATE INTERVAL CONTINUOUS WITH BRHM.																											
R		120.00	125.00		CLASTS IN THIS INTERVAL CARBONACEOUS. CLASTS MAINLY ARSI.																											
/	FAL	120.60	121.01	0.41			X FAUL			GG5							R														
L									N																						
/	CON	133.22	138.38	5.16			SAND	C6		SN9	G;	FU	3	4	4	5	P	1	LM		U65			P)		B*				
L									3A		CB)	SS		4					CN		70		C.								
/		133.22	138.38	5.16			3 BRHT			*C+	R*	F*				LO4	R	2	BD								B*				
L									3A			B*	MX			KN6							C.								
/		133.22	138.38	5.16			1 BRHT			*C)	R*	F*				MP6	R	4									B*				
L									3A			B*				LO4							C.								
/	FLT	138.10	138.38	0.28			X FAUL										R					V1			<+		B)				
L									1A														C.								
R		138.10	138.38		FAULT IS HIGH ARGILLITE SAND.																											
/	FGT	138.38	140.84	2.46			ARGL			SI=	SS		0	1		2	P	2	BD		63	<*					D*				
L									1A				7						CL		63		C.								
R		138.38	140.84		CLEAVAGE COINCIDENT WTH BEDDING PLANE.																											

X E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX TX	TX TX	F S	C C	% U	M O	ARG CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		140.84	142.10	1.26			BRHT			*C1	R*	F*					LD6	P													B)		
L								3A			B*			C			LN4							C.									
/		142.10	190.90	48.80			BRHM	SL	BA	SI1			0	1		2	OSX	P				>.			>-	>.		7*					
L								1A	PY															C.	>.					B*		
/	FGT	142.65	151.49	8.84		X	ARGL			SI=			0	1		2	MP8	R	2	BD		80	>+		>1	>=		7=					
L								1A									LN2								>+	>+				B*		
R		142.65	151.49		MICROVEINING CONTAINS CA-BA-QZ-SD-PY AND SL AS BLEBS.																													
R		142.65	151.49		THIS INTERVAL IS PROBABLY A FRAGMENT; ITS UPPER AND LOWER																													
R		142.65	151.49		BOUNDARIES ARE BOTH BRECCIATED.																													
/		152.50	157.58	5.08		X	BRHM	SL	BA	SI1			0	1		2	OSX	R				#1			#1	#1		7*					
L																C								#)					#*		
/	FLT	159.10	162.30	3.20		X	BRHT			*C+	F*	B*					MP7	R				V=			V.			B*					
L								2A		GG2	B*	H*		C			LO3				B.	V=	V*										
/		171.00	172.00	1.00		X	BRHM	SL	BA	SI1			0	1		2	OSX	R				#=			#=	#)		7*					
L																									#*							
/	FLT	172.00	173.20	1.20		X	BRHM	SL	BA	SI1			0	1		2	OSX	R				>.			>-	>.		7*					
L										GG2																							
/	FLT	173.20	174.90	1.70		X	BRHT			*C*							MP9	R										B*					
L										GG2						0	KN1																
R		173.20	174.90		MATRIX APPROACHES BRPM WITH SANDY MUDSTONE.																													
/	FLT	180.14	181.05	0.91		X	BRHT			GG5								R															
L										*C)																							
/		190.90	204.05	13.15			BRHT			*C)	R*	F*					MR8	P				<=						D-					
L								1A		GR)	B*					0	LP2							C.	<.	<=							
R		190.90	204.05		INTERVAL IS GRAPHITIC IN SHEARS.																													
/	FLT	193.04	193.34	0.30		X	BRHT			*C)	R*	F*					MR8	R				<=						D-					
L										GG2																							
/		193.34	194.05	0.71		X	BRHT			*C=	R*	F*					MQ2	R				<=						D*					
L												H*					8													B-		
/	FLT	194.05	194.35	0.30		X	BRHT			=							Q2	R										*					
L										GG4		H*					8																
/		195.50	197.10	1.60		X	BRHT			*C=	R*	F*					MQ2	R				<=						D*					
L												H*					8																
/	FLT	197.90	198.40	0.50		X	BRHM	CR		GG5							NP9	R				<=			D+	<+		B=					
L									1A	SN2							KL+								<+	<=		M1					
/	FLT	198.40	200.25	1.85		X	BRHT			SN=	R*	F*					MR8	R				<=						D-					
L										GG=																							

K F Y	F -L- G	FROM	- TO -	INT	RECOV RQD	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX TX	TX TX	F S	C C	% O	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		204.05	211.65	7.60			CGBR		3A	*C2 GG*	F*	B*				0	MP2 LO8	P							P)			D*					
/		204.05	211.65	7.60		2 BRHT			2A	*C=	F*	B*	SS			0	MQ6 LO4	R				<*				<. <*			D*					
/		204.05	211.65	7.60		2 BRHT	GR CR		1A	*C. GR*						0	LP8 KO2	R				<.							D-					
/	FRG	204.05	211.65	7.60		1 SAND	CR		3A	CR) MX	SS	3 4 2 4			8			R											B*				
R		204.05	211.65		MATRIX IS SANDY AND CONTAINS ABOUT 70% ANGULAR CHERT GRAINS.																														
R		204.05	211.65		GRAPHITE LINES SHEARS AT IRREGULAR INTERVALS.																														
R		204.05	211.65		THE CHART RICH PORTIONS OF THIS INTERVAL ARE NEARLY IDENTICAL																														
R		204.05	211.65		TO THE CGBR PREVIOUSLY DESCRIBED. THE INCREASED ARGILLITE																														
R		204.05	211.65		CONTENT IS DUE TO LARGE, DEFORMED FRAGMENTS FOR WHICH THE CGBR																														
R		204.05	211.65		FORMS A MATRIX AND TO RELATIVELY SMALL AMOUNTS OF HOMOGENEOUS																														
R		204.05	211.65		ARGILLITE SUSPENDING RARE CHERT CLASTS (BRPM).																														
R		204.05	211.65		CARBON CONTENT OF INTERVAL VARIES, AND IS GRAPHITIC IN SHEARS.																														
/	CON	207.57	207.72	0.15		X SAND			3A	CB1 G;	R*	3 4 4 7			3			R							U			B*				
R		207.57	207.72		THIS PEBBLY SAND GRADES INTO CARBONACEOUS ARGILLITE BENEATH.																														
/	CON	207.72	209.09	1.37		X ARGL	CR GR SI)		N	SS	0 1	1						R		CN	60				<. <=			D-					
L									SF										2	BD	60												
R		207.72	209.09		UPHOLE CONTACT IS GRADATIONAL WITH GRADED PEBBLY SAND.																														
/	FRG	211.65	224.20	12.55			ARSN	CR GR	2A	SN4 SS	R*	3 4	4				ML)	P	2	BD	75					B*		P+					
R		211.65	224.20		THE PRESENCE OF RARE CHERT CLASTS IS TENUOUS EVIDENCE FOR																														
R		211.65	224.20		BRECCIATION WITHIN THIS INTERVAL. SOFT SEDIMENT DEFORMATION																														
R		211.65	224.20		IS STRONG. BEDDING UNDULATES BETWEEN 70 AND 80 DEGREES.																														
/		222.20	223.90	1.70		X CGCP			2A		F*	R*				0	LO3 LO7	R				V) V.							D*					
/		224.20	224.90	0.70		BRHM	CR		1A	*C+	R*	H*					MQ7 KO3	P				<) <*							D*					
/		224.90	228.90	4.00		SAND	GR		2A	SS		3 4 4 7			5			P	2	BD	>)	65							B.				
/		224.90	228.90	4.00		1 ARGL	CR GR		N	SS								R											D*				
R		224.90	228.90		GALENA OCCURS AS A BLEBBS WITHIN QUARTZ VEINS. INTERVAL IS																														
R		224.90	228.90		GRAPHITIC IN SHEARS. SMALLER QUARTZ VEINS DEFORMED BY SOFT																														
R		224.90	228.90		SEDIMENT DEFORMATION.																														
/	CON	225.60	226.30	0.70		X ARSI			1A	SI1 SS	G;	0 2	8					R	2	CN BD	U60 60	>1			>*	<*		B)	B.				

Digitized by ARCHIVE

K E Y	F -L-	F R O M -	T O -	I N T	RECOV RQD	MD % AGE	ROCK EV	TM RN	TM LC	TM QM1 QM2	TX 1	TX 2	F S	C C	% O	M D	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		225.60	226.30																													
R		225.60	226.30																													
/	FAL	227.00	228.00	1.00			X	ARGL	CR	GR	GG1		0	1		1		R				>6					B*		B.			
L									9															<)				B-	L-			
R		227.00	228.00																													
R		227.00	228.00																													
R		227.00	228.00																													
R		227.00	228.00																													
R		227.00	228.00																													
R		227.00	228.00																													
/	FRG	228.90	238.36	9.46				ARGL	CR	GR		MX	0	1		1		P	2	BD		72	>+			C.	HE	6+	B.			
L									N	SF										CV		72		>*		C-		B*				
/		228.90	238.36	9.46			2	BRHT	CR	GR	*C)	R*	H*				L06	R					V+			<.		B+	B.			
L									2A	SF		5*	F*		)	C	KN4							V.					B)			
/		228.90	238.36	9.46			+	BRPM	CR	GR	*C+	R*	F*					R										B*				
L									1A	SF							JL4															
R		228.90	238.36																													
R		228.90	238.36																													
R		228.90	238.36																													
R		228.90	238.36																													
/		238.36	251.62	13.26				BRHT	GR		*C4	R*	F*				LO2	P								<.		V+				
L									1A			B*				O	JL8															
R		238.36	251.62																													
R		238.36	251.62																													
/		240.80	251.62	10.82			X	BRHT	GR		*C1	R*	F*				MR5	R								<*	HE	V+				
L									2A							C	LP5										B*		V)			
R		240.80	251.62																													
/		251.62	266.09	14.47				ARSI	CR	GR	SI1	SS	SC					P	2	BD		U23	<*			<*		7+				
L									1A		SN+	(L												<.								
R		251.62	266.09																													
R		251.62	266.09																													
/	FAL	263.20	266.09	2.89			X	ARSI	CR	GR	GG2	SS	SC					R	2	BD		U23	#1			#+		7+				
L																								#+						B.		
R		263.20	266.09																													
R		263.20	266.09																													
/	FAL	266.09	271.88	5.79				ARGL	CR	GR	GG3	SS	SC	0	1		1	P				#=				#*		8)				
L									N	SF														#)								
/	FAL	266.09	271.88	5.79			2	SAND			GG5	SS		3	4	4	5	R				<=				<*		P+				
L									1A					6										<)								
/	FAL	266.09	271.88	5.79			1	BRHT			*C*	R*	H*				MO7	R				<+				<*		D)				
L									2A			F*					LO3							<*								

MICROFILMED BY RMF

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K  F  F R O M - T O -  I N T RECOV  MD % ROCK TM TM QM1 TX TX F C % M ARG   RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
E -L- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- --  - - - -
Y  G                        R Q D  AGE EV RN LC TM QM2 TX TX S C O O CHT      2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA
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/ FAL  266.09  271.88   5.79            1 BRPM CR SF           0 1   1       R                  <)          <-     D*
L                                          N GR                                KL+                        <-
R      266.09  271.88      SAND POSSIBLY INJECTED.  RIP-UP CLASTS FROM 0.5 TO 2.5 CM
R      266.09  271.88      ACROSS.
/ SHR  271.88  280.92   9.04               ARGL CR GR SI=       0 1   2       P  2 BD      67 <)          <*     D-
L                                          N SF                                                       <.
/ FAL  271.88  275.84   3.96             X ARGL CR GR SI=       0 1   2       R  2 BD      67 <)          <*     D-
L                                          N SF GG4                                                   <.
/      280.92  308.20  27.28               BRHT        *C) R* H*              MS7   P                  <*          <*     8)
L                                      1A          F* B*          0 LO2                                <* <-          <*
/ FRG  280.92  308.20  27.28             1 SAND        SN9 SS XB 3 4   6       R                  <-                 B*
L                                      3A            // G; 6                                        <- <.
R      280.92  308.20      INTERVAL DOMINATED BY LARGE ARGL AND ARSI FRAGMENTS.
R      280.92  308.20      BIMODAL NATURE GIVEN BY SMALL CLAST MATRIX IN OPEN STRUCTURE.
R      280.92  308.20      CLAST REPLACEMENT BY PYRITE COMPLETE IN SOME CLASTS.
R      280.92  308.20      PYRITE ALSO AS LAMINATIONS AND VEINS.
R      280.92  308.20      SAND CLASTS VARIOUSLY SHOW CROSS-BEDDING, GRADED BEDDING, AND
R      280.92  308.20      PLANAR BEDDING, BUT IN THE NATURE OF CLASTS; NO BEDDING ANGLES
R      280.92  308.20      OR TOP DIRECTIONS CAN BE DETERMINED.
/      308.20  315.10   6.90               BRPM        SN8 IM    3 4   5 MR2   P  2 BD      65          <- HE P)
L                                      2A                          1 O                                  B-
R      308.20  315.10      THIS INTERVAL IS CHARACTERIZED BY VARIOUS SIZED ARGL CLASTS
R      308.20  315.10      THAT ARE ANGULAR TO MODERATELY ROUNDED.  THE "OTHER" FRAGMENTS
R      308.20  315.10      ARE LAMINATED SAND.  HEMATITE LOCALLY DISSEMINATED.
R      308.20  315.10      ISOLATED BEDDING WITH ANGLE COINCIDENT WITH IMBRICATION.
/ FAL  310.80  311.20   0.40             X FAUL CR GR GG3                  R
L                                          N
R      310.80  311.20      POSSIBLE BRSN REPETITION DUE TO FAULTING.
/      311.20  312.19   0.99             X BRPM        SN2 G; R* 3 4   5 LP8   R  2 BD      65          <- HE P)
L                                      1                           JL+
R      311.20  312.19      APPARENT GRADING OF ARGL CLASTS.
/      315.10  322.50   7.40               BRHT CR       F* B*          MQ7   P                  Y*          D)
L                                      2A          R*         *   K03                                          <-
R      315.10  322.50      RARE BITUMINOUS CLASTS.
/      322.10  322.50   0.40             X BRPM        SN9       3 4   5 KM+   R                              HE
L                                      2A                  6       KN1                                        0-
/      322.50  326.55   4.05               CGCP        *C1 F* B*          KN2   P                                  7+
L                                      3A          R* CU          0 LO8
R      322.50  326.55      INTERVAL GENERALLY COARSENS UPWARD, BUT GRADING NOT APPARENT,
R      322.50  326.55      PYRITE AS BLEBS, AND VEINING.
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K E Y	F -L- G	F R O M -	T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM QM2	TX TX TX	F S	C C	% O O	M O CHT	ARG	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		326.55	326.90			CONTACT GRADATIONAL WITH PREVIOUS CGCP INTERVAL.																											
R		326.55	326.90			GRADES TO CGCP.																											
/		326.55	328.35	1.80			CGCP			*C1	F*	B*				KO2	P													B)		
L										G;						P															
/	CON	326.55	326.90	0.35		X	CGSN			SN9	G;	MX	3	4	4	7	R		CN		38								B*		
L								2A								6															
R		326.55	328.35			CHERT CLASS (SIZE P).																											
R		328.35	330.40			LARGE PEBBLE-SIZED CLASTS INCREASE IN FREQUENCY DOWNHOLE.																											
R		328.35	330.40			UNIT GRADES INTO LOWER CGCP.																											
/		328.35	369.72	41.37			CGCP			*C)	F*	B*				LO1	P						<=		<=		B*					
L										SN1	G;	FU			O	KP9													<*			
/		328.35	330.40	2.05		X	CGSN				G;	MX	3	4	4	7	R								V*							
L								2A								6															
/		353.00	355.40	2.40		X	CGSN	HE		SN9	FU	MX	F	H	4	O	R						<=			HE	B*				
L								3A								6											R.				
R		353.00	355.40			ONE LARGE COBBLE CHERT CLAST. PEBBLE CLASTS DOMINATELY CHERT,																											
R		353.00	355.40			AND LARGER ONES CONCENTRATED NEAR BOTTOM OF INTERVAL.																											
/		355.40	358.75	3.35		X	CGBR	GR		SN2	F*	B*				KO3	R						V*		<=							
L								2A		*C2						KO7															
/	FLT	360.60	362.40	1.80		X	CGCP			*C1	F*	B*				KN2	R											7+				
L										GG2																						
/		363.57	364.85	1.28		X	CGBR			*C4	VG					KM3	R						<=		<*		B*					
L								2A							O	KN7															
/		364.85	368.60	3.75		X	CGSN			SN8	VG	MX	F	H	3	O	R						<.		<=		B*					
L								2A								6															
/		369.72	376.63	6.91			BRHT	GR	CR	*C1	F*	B*				MR5	P								<.							
L								2A	SF		R*					KO5															
R		369.72	376.63			INTERVAL HAS LARGE ARSI CLASTS SUPPORTED BY MUCH SMALLER CLAST																											
R		369.72	376.63			BRHT WHICH CONTAINS ALL OF THE CHART.																											
/		375.00	375.81	0.81		X	BRHT	GR	CR	*C1	F*	B*				KM3	R								<.							
L																KO7															
R		375.00	375.81			BLUE POSSIBLE BARIUM MINERAL AS COATING.																											
/		375.81	376.63	0.82		X	SAND			SN9	VG	MX	3	4	4	L	R											HE	B*		
L								2A								6												B*			
/		376.63	396.95	20.32			CGCP			SN=	F*	B*				MO1	P						<)		<.		HE	B*				
L								3A							C	LP9									<=		R*				
/		383.65	385.46	1.81		X	SAND					MX	SS	3	4	3	4	R					<*		<.		HE					
L								2A								7											B=					

K E Y	F -L-	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	TM QM1 QM2	TX TX	TX TX	F S	C C	% O O	M O O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		388.00	391.00	3.00			X	CGCP		SN=	F*	B*					MN1	R				>+				<.	HE	B*				
L									3A		R*	VG				C	LO9									<=	R*			U.		
/		391.00	393.25	2.25			X	SAND		SS	G;	3	4	5	N			R			U	<)										
L															-									C.								
R		391.00	393.25		GRADING TENUOUS EXCEPT AT BOTTOM OF INTERVAL WHERE LARGER																													
R		391.00	393.25		CLASTS THAT ARE ALL ARGL OCCUR.																													
/		393.25	396.95	3.70			X	CGCP		SN=	F*	B*					KN1	R				>)				<.	HE	B*				
L																O								C.								
/		396.95	404.40	7.45				BRPM		SN7	F*	B*	3	4	4		MP5	P				<*				<*	HE	B*				
L									2A	*C)	R*				0		KN5										R-					
/		398.28	399.80	1.52			X	BRPM	CR GR	SN7	F*	B*	3	4	4		MQ8	R				<*				<)	HE	8)				
L									1A SF	*C)	R*				0		KN2										R-					
/	FLT	399.80	400.20	0.40			X	BRPM	CR GR	SN7	F*	B*	3	4	4		MP5	R				>9				<+	HE	B)				
L									WA	*C)	R*				0		KN5										R-					
/		400.20	402.00	1.80			X	BRPM		SN7	F*	B*	3	4	4		MP5	R				<*				<*	HE	Q+				
L									2A	*C)	R*				0		KN5										R-					
/	FAL	402.00	402.34	0.34			X	BRPM	CR GR	SN7	F*	B*	3	4	4		MP5	R				>5				<*	HE	B*				
L									2N	GG6	R*				0		KN5								<.		R-					
/		402.34	404.03	1.69			X	SAND		SN8	SS	MX	3	3	3			R					#2					7)				
L									1A																							
/		404.03	404.40	0.37			X	CGSN	SF	SN7	R*	B*					KM2	R					#1			<*		R)				
L									3A	*C*	F*				0		K08															
R	SAM	404.40	404.40		BEGIN SAMPLING ABOVE MAIN ORE ZONE.																													
/		404.40	406.40	2.00				CGSN	SF	SN7	R*	B*					KM2	P					#1			<*		R)				
L									3A	*C*	F*				0		K08															
/		406.14	406.40	0.26			X	PBSN		SN9	G;	LR						R			U	<.						B-				
L												BS																				
R		406.14	406.40		POSSIBLE BOUMA: ABC. TURBIDITE TRUNCATES LAMINATE OF LOWER																													
R		406.14	406.40		LMSX. COMPLEX SEQUENCE OF CLASTICS WITH MATRIX DOMINATED																													
R		406.14	406.40		BY SAND.																													
R		406.40	406.40		BEGIN MAIN ZONE ORE BODY.																													
K	UM1	406.40	406.40	0.00																													
/	LSX	406.40	407.40	1.00				LMSX	BA SL	CH1	SS							P	1	LM		55			L7			L=				
L									TA GL											CN		80						L+	L1			
R		406.40	407.40		CONTACT WITH UPPER PBSN EROSIONAL, IRREGULAR.																													
/	LSX	406.80	407.40	0.60			X	LMSX	BA SL	CH)	SS							R	1	LM		70			L9			L+				
L									9 GL																				B)	L=			

KEY	F -L-	F G	FROM ----.--	TO ----.--	INT ---.--	RECOV RQD ---.--	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX 1X	TX TX	F S	C C	% O	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R			406.40	411.10																														
											BY THE OVERLYING BRECCIA-CONGLOMERATE SEQUENCE.																								
/	LSX	407.40	411.10	3.70				LMSX	BA	SL	CH)	SS							P	1	LM		65				L9				L+		
L									9	GL																		B)	L=				
/		408.06	410.16	2.10			X	LMSX	BA	SL	CH)	SS							R	1	LM		70				L9				L+		
L									9	GL																		B)	L=				
/		408.55	408.60	0.05			X	SILT	SF		SI6		1	2	5	3			R	2	BD		65				<-		D-				
L									1A																<-								
/	FRG	410.16	410.60	0.44			X	SILT	SF		SI6	MX	1	2	5	3			R						<-		<-		D-				
L									1A																								
/	LSX	410.60	411.10	0.50			X	LMSX	BA	SL	CH)	SS							R	1	LM		60				L9				L+		
L									9	GL																		B)	L=				
K	LM1	411.10	411.10	0.00																														
/		411.10	416.10	5.00				SILT	SF	SL	SI6	SS	SC	1	2	5	3		P	2	BD		50 >*				83		P)				
L									1A	BA																					V*		
/		411.10	416.10	5.00				2 LMSX			CH=	SS							R	1	LM		50 >)				88				L+		
L									9																						L+		
R		411.10	416.10					QZ-BA VEINING AS BRECCIA FILL IN LMSX NEAR TOP OF INTERVAL.																											
R		411.10	416.10					LMSX CONCENTRTED NEAR TOP OF INTERVAL WITH LOCAL BEDS.																											
R		411.10	416.10					BARITE LAMINATIONS THROUGHOUT SILTSTONE. MANY QUARTZ VEINS																											
R		411.10	416.10					TRUNCATED BY SOFT SEDIMENT DEFORMATION.																											
/		415.10	416.10	1.00			X	SILT	SF	SL	SI6	SS	SC	1	2	5	3		R	2	BD		60 >*				83		P)				
L																																		
/		416.10	418.20	2.10				SILT	SF	SL	SI1	SS	SC	1	2	5	3		P	2	BD		50 K+				83		P)				
L																																		
/		418.20	428.55	10.35				ARGL	CR	SL		SC	0	1		1			P	2	BD		73 K=				7)		L*				
L									N	BA								JK*			CV		70								V)		
R		418.20	428.55					CLEAVAGE AT 45 DEGREES TO BEDDING PLANE.																											
/		421.28	428.55	7.27			X	ARGL	CR	SF		SC	0	1		1			R	2	BD		73 <*				<*		L*		0		
L																																		
/		426.80	427.30	0.50			X	BRPM	SF	CR	*C0	R*	H*						R								B+		L1				
L									N									KL3															

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6B02

DRILLHOLE/TRAVERSE :	81-DH079	COLLAR ELEVATION:	1362.88	AZIMUTH(DEG) : 210.00	GEOLOGGED BY : PCH +
TOTAL DEPTH/LENGTH :	403.86	NORTHING(- IF S):	7004716.00	VERTICAL ANGLE : -60.00	DATE (YY/MM/DD): 810905
CORE/HOLE DIAMETER :	HQ	EASTING (- IF W):	432979.56	CO-ORD SYSTEM : UTM	PROJECT NUMBER : J-END

SER. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	149.96	211.50	-55.50
2	162.15	209.00	-55.50
3	174.34	211.00	-55.00
4	186.53	211.00	-55.00
5	198.73	211.00	-55.00
6	210.92	211.50	-54.50
7	223.11	211.00	-54.00
8	235.30	211.50	-54.00
9	247.49	210.00	-54.25
10	259.67	211.50	-54.50
11	262.13	209.00	-54.00
12	268.83	209.00	-53.00
13	281.02	207.00	-50.00
14	293.21	208.00	-48.50
15	305.41	206.50	-47.50
16	317.60	205.50	-46.50
17	329.79	206.50	-45.50
18	341.98	205.00	-44.50
19	354.18	206.00	-43.75
20	366.37	207.00	-43.00
21	378.56	205.00	-42.66
22	390.75	206.00	-42.00
23	402.95	206.42	-42.00

KEY	F L A G	- I N T E R V A L - FROM - TO - (UNITS = . DEC.PLACE) (MT=METRIC FT=FOOTRIC)	INT(.)	CORE RECOV- ERY	T- % M O	M I	ROCK TYPE	TYPI- FYING TM	QAL MIN TM	TEX- TURES MAT	GRAIN CHARACS TX	TX	F	F	C	%	M	ARG	PGI /RI	T	ID	STRUCTUR-1 STK	DIP	ALTERATION MINS H A	H A	H A	H A	H A	ANY MIN	ORE-TYPE MINS H A	H A	H A	H A	ANY MIN	SUMMARY ALT	ORE
Y								1	2	QM1	1	2								1		AZM	RT	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A	1	A	2
K	F			ROCK	FM		RT	TM	QM2	TX	TX	S	C	O	O	CHT			T	ID	STK	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA				
E	L			QUAL	AGE	EN-	G	LC-	3	3	4	Q			/				2		AZM	RT	H	H	H	H	H	H	H	H	H	H	1		1	
Y	G			DESIG		VIR		COL				R			C					STRUCTUR-2			A	A	A	A	A	A	A	A	A	A		2		2
R	SVY	0.00	0.00					ALL SURVEYS WERE TAKEN WITH A MULTI-SHOT																														
R	SVY	0.00	0.00					INSTRUMENT EXCEPT FOR 262.13 M WHICH WAS DONE WITH A																														
R	SVY	0.00	0.00					SINGLE SHOT. SURVEY DATA IS AVAILABLE FOR EVERY 3.3																														
R	SVY	0.00	0.00					METER INTERVAL.																														
/	FRG	0.00	11.92	11.92				OVER												P																		
L																																					
R		0.00	11.92					COMPETENT CORE CONSISTS OF CGCP (UNIT 2) AND SILTSTONE (IMP FM)																														
R		0.00	11.92					FLOAT BOULDERS.																														

K E Y	F -L-	F R O M -	T O -	I N T	RECOV RQD	MD % AGE	ROCK EV	TM RQ	TM LC	TM QM1 QM2	TX	TX	F S	C	% C	M O	ARG CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/	FRG	11.92	14.38	2.46		OVER												P														
L																																
R		11.92	14.38			SEMICONSOLIDATED MATERIAL CONSISTS OF FERRI-CRETE BRECCIA																											
/		14.38	169.77	155.39		ARSI	SD		SI1	SS		LC						P	3	BD		70										
L									5	A																						
R		14.38	169.77			RUSTY WEATHERING ALONG CLEAVAGE FRACTURES 14.38M TO 25.90M																											
/		38.65	38.90	0.25		X VEIN												R												C.		
L																														>9		
R		38.65	38.90			TRACE GL ENCRUSTING SMALL OPEN SPACE VUGS. CONSIDERABLE ARSI																											
R		38.65	38.90			INTERVAL (29.57 TO 46.02) CORED PARALLEL TO BD.																											
/		52.50	52.51	0.01		X ARSI	SD		SI1	SS		LC						R	3	BD		70										
L																																
/		52.80	60.00	7.20		X ARSN	SC		SI3			LC						R	4	BD		85										
L									5	A																						
/		72.21	72.22	0.01		X ARSI	SD		SI1	SS		LC						R	3	BD		00										
L																																
/		73.63	82.90	9.27		X ARSN	SD		SI3	SS		LC						R	3	BD		75										
L									6	A																						
/		75.00	75.01	0.01		X ARSI	SD		SI1	SS		LC						R	3	BD		60										
L																																
/		75.29	75.30	0.01		X ARSI	SD		SI1	SS		LC						R	3	V/		85										
L																																
/		76.50	76.51	0.01		X ARSI	SD		SI1	SS		LC						R	3	BD		85										
L																																
/		85.00	85.01	0.01		X ARSI	SD		SI1	SS		LC						R	3	BD		70										
L																																
/		90.43	90.44	0.01		X ARSI	SD		SI1	SS		LC						R	3	V/		00										
L																																
/		92.00	92.01	0.01		X ARSI	SD		SI1	SS		LC						R	3	BD		60										
L																																
/		93.07	93.77	0.70		X ????												R		V/		90										
L																																
/		99.70	99.71	0.01		X ARSI	SD		SI1	SS		LC						R	3	BD		65										
L																																
/		103.00	103.01	0.01		X ARSI	SD		SI1	SS		LC						R	3	BD		70										
L																																

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	TM GM1 GM2	TX	TX	F S	C C	% M O O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/ L		104.60	104.61	0.01			X	ARSI	SD	SI1	SS	LC					R	3	BD		65											
/ L		110.25	110.75	0.50			X	ARSI	SD	FOS N	RU	LC					R	3	BD		67											
R		110.25	110.75		RIP-UP CLASTS CONSIST OF WELL ROUNDED ELLIPSOIDAL SHAPED																												
R		110.25	110.75		FRAGMENTS-SOME SHAPES HIGHLY SUGGESTIVE OF FOSSIL DETRITUS																												
/ L		114.30	114.31	0.01			X	ARSI	SD	SI1	SS	LC					R	3	BD		67											
/ L		117.65	117.66	0.01			X	ARSI	SD	SI1	SS	LC					R	3	BD		71											
/ L		120.70	120.71	0.01			X	ARSI	SD	SI1	SS	LC					R	3	BD		73											
/ L		123.75	126.80	3.05			X	ARSI	SD	SI3	SS	LC					R	3	BD		70											
/ L		123.95	126.80	2.85			X	ARSI	SD	SI2	SS	LC					R	3	BD		67											
/ L		130.15	130.16	0.01			X	ARSI	SD	SI1	SS	LC					R	3	BD		72											
/ L		133.20	133.21	0.01			X	ARSI	SD	SI1	SS	LC					R	3	BD		73											
/ L		134.00	138.75	4.75			X	ARSI	SD	SI3	SS	LC					R	4	BD		70											
R		134.00	138.75		REDUCING TO NQ AT 138.07																												
/ L		144.30	152.70	8.40			X	ARSI	SD	SI3	SS	LC					R	3	BD		60											
/ L	FLT	153.30	153.62	0.32			X	FAUL		GG6							R		C/		60											
/ L	FLT	156.88	157.28	0.40			X	FAUL		GG9							R		C/		60											
/ L		160.90	162.42	1.52			X	ARSI	SD	SI3	SS	LC					R	4	BD		60											
/ L		169.77	196.55	26.78				ARSN		SI4							P	6														
/ L		192.00	192.90	0.90			X	SILT	SD	RU	LC	CC	X	C			R															

K E Y	F -L-	F R O M ----.--	- T O - ----.--	I N T ---.--	RECOV MD % ROCK AGE	TM EV	TM RQD	QM1 LC	TX TM	TX QM2	F TX	C TX	% M S	ARG C	RI 1 ID AZM DIP 2 ID AZM DIP	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A 1 A 2
																MG	MU	CL	SD	QS	HA	PR	MT	SL	HA	
R		192.00	192.90		WISPY, MOTTLED TEXTURE (PERHAPS DEWATERING COMPACTIONAL FEATURE)																						
R		192.00	192.90		SIDERITIZED PATCHES SEPARATED BY SHALY PARTINGS.																						
/ L		194.76	196.55	1.79			X	SILT	SD	RU	LC	CC	X	C	R												
/ L	CON	196.55	230.65	34.10				ARGL		LM BI N					P	2	LM	D									C/ 70
R		196.55	230.65		THIS INTERVAL IS CHARACTERIZED BY COMPOSITIONAL MED GREY COLOUR																						
R		196.55	230.65		BANDING-BLEACHED BANDS ARE BIOTURATED WITH WELL DEVELOPED WORM																						
R		196.55	230.65		TUBES INDICATING TOP DIRECTION DOWN THE HOLE.																						
/ L		201.47	201.48	0.01			X	ARGL		LM	BI				R	2	BD	D67									
/ L		208.18	208.19	0.01			X	ARGL		LM	BI				R	2	BD	D68									
/ L		214.60	214.61	0.01			X	ARGL		BI	BI				R	2	BD	D73									
/ L		219.76	219.77	0.01			X	ARGL		LM	BI				R	2	BD	D72									
/ L		226.77	226.78	0.01			X	ARGL		LM	BI				R	2	BD	D67									
/ L	FAL	230.65	231.65	1.00				FAUL	GR						P												
R		230.65	231.65		STRONGLYGRAPHITIC CONTAINING CONTORTED QZ STRINGERS.																						
/ L		231.65	248.80	17.15				ARSN	SD	SI3					P	3						Q*					>+
/ L		235.92	235.93	0.01			X	ARSN	SD	SI3					R	3	BD	45				Q*					>+
R		248.80	249.94		STRONGLY BRECCIATED-ARSI FGT'S CHLORITIZED WITH CORRODED RIMS																						
/ L		248.80	306.00	57.20				ARSI		LM	SS				P												
/ L		248.80	249.94	1.14			4	ARSI							R							Q*				P*	>6
/ L		252.07	252.08	0.01			X	ARSI		LM	SS				R		BD	30									
/ L		264.26	264.27	0.01			X	ARSI		LM	SS				R		BD	55									
/ L		269.00	269.01	0.01			X	ARSI		LM	SS				R		BD	70									

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R Q D	MD % ROCK AGE	TM EV	TM RQ	QM1 LC	TX TM	TX QM2	F TX	C TX	% S	M C	ARG O	RI O	1 CHT	2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		271.58	271.59	0.01		X	ARSI		LM	SS							R			BD		85												
L																																		
/		274.93	274.94	0.01		X	ARSI		LM	SS							R			BD		57												
L																																		
/		279.00	279.01	0.01		X	ARSI		LM	SS							R			BD		58												
L																																		
/		283.77	283.78	0.01		X	ARSI		LM	SS							R			BD		65												
L																																		
/		287.00	287.01	0.01		X	ARSI		LM	SS							R			BD		90												
L																																		
/		294.74	294.75	0.01		X	ARSI		LM	SS							R			BD		65												
L																																		
/		299.92	299.93	0.01		X	ARSI		LM	SS							R			BD		45												
L																																		
/		306.00	332.20	26.20			ARSN	SD	SI3	LC	SS						P	3		BD														
L									7	A																							V+	
/		306.32	306.33	0.01		X	ARSN	SD	SI3	LC	SS						R	3		BD		60												
L									7	A																							V+	
/		312.42	312.43	0.01		X	ARSN	SD	SI3	LC	SS						R	3		BD		50												
L									7	A																							V+	
/		318.82	318.83	0.01		X	ARSN	SD	SI3	LC	SS						R	3		BD		50												
L									7	A																							V+	
/		325.22	325.23	0.01		X	ARSN	SD	SI3	LC	SS						R	3		BD		60												
L									7	A																							V+	
/		331.32	331.33	0.01		X	ARSN	SD	SI3	LC	SS						R	3		BD		65												
L									7	A																							V+	
/		332.20	403.86	71.66			ARSI	SD	SI1	LC	SS						P	2		BD														
L									6	A																					1	LM		
/		334.37	334.38	0.01		X	ARSI	SD	SI1	LC	SS						R	2		BD		60												
L									6	A																					1	LM		
/		341.50	341.51	0.01		X	ARSI	SD	SI1	LC	SS						R	2		BD		65												
L									6	A																					1	LM		
/		349.61	349.62	0.01		X	ARSI	SD	SI1	LC	SS						R	2		BD		70												
L									6	A																					1	LM		

KEY	F -L-	F G	FROM ----.--	TO ----.--	INT ---.--	RECOV RQD ---.--	MD % ROCK AGE	TM FV	TM RQ	QM1 LC QM2	TX TM 6	TX TX A	F S	C C	% O	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/			351.74	351.75	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		85												
L											6	A											1	LM										
/			358.00	358.01	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		90												
L											6	A											1	LM										
/			362.00	362.01	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		75												
L											6	A											1	LM										
/			367.23	367.29	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		65												
L											6	A											1	LM										
/			373.68	373.69	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		65												
L											6	A											1	LM										
/			379.17	379.18	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		50												
L											6	A											1	LM										
/			386.18	386.19	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		45												
L											6	A											1	LM										
/			392.23	392.29	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		45												
L											6	A											1	LM										
/			396.85	396.86	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		30												
L											6	A											1	LM										
/	FLT		401.42	402.64	1.22		X	FAIL		GG8								R																
L																																		
/			403.85	403.86	0.01		X	ARSI	SD	SI1	LC	SS						R	2	BD		90												
L											6	A											1	LM										

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6802

DRILLHOLE/TRAVERSE :81-DH080	COLLAR ELEVATION: 1219.65	AZIMUTH(DEG) : 15.00	GEOLOGGED BY : DHG +
TOTAL DEPTH/LENGTH : 249.02	NORTHING(- IF S): 7002524.00	VERTICAL ANGLE : -83.50	DATE (YY/MM/DD): 810000
CORE/HOLE DIAMETER : HQ	EASTING (- IF W): 436837.19	CO-ORD SYSTEM : UTM	PROJECT NUMBER : J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	24.38	14.00	-83.00
2	44.20	16.00	-82.75
3	66.45	32.00	-82.50
4	83.82	32.00	-82.50
5	109.73	34.00	-82.00
6	128.02	40.00	-81.00
7	154.84	46.00	-79.33
8	173.43	50.00	-79.00
9	191.72	49.00	-78.75
10	201.47	53.00	-78.25
11	216.71	52.00	-78.00
12	231.95	52.00	-78.50
13	249.02	46.00	-78.00

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   F   - I N T E R V A L -    CORE  T- %       TYPI- QAL  TEX-  GRAIN        PGI   STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS SUMMARY
K  L (UNITS =    .  DEC.PLACE)RECOV-  M M ROCK FYING MIN TURES CHARACS                         H  H  H  H  H ANY H  H  H ANY  ALT ORE
E  A  (MT=METRIC FT=FOOTRIC)  ERY    O I      TM TM MAT TX TX F C % M ARG  /RI T ID STK DIP  A  A  A  A  A MIN A  A  A MIN - - - -
Y  G  F R O M - T O -  I N T ( . )  D X TYPE  1  2 QM1  1  2 F F C A          1    AZM  RT QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
- --- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                          ROCK   FM     RT    TM QM2 TX TX S C O O CHT      T ID STK DIP MG MU CL SD QS HA PR MT SL HA
E  L                          QUAL   AGE EN- Q LC- 3      3  4 O     /          2    AZM  RT H  H  H  H  H  H  H  H  H  H   1   1
Y  G                          DESIG      VIR   COL            R     C            STRUCTUR-2  A  A  A  A  A  A  A  A  A  A    2   2

R SVY    0.00    0.00      SPERRY-SUN MULTI-SHOT RESULTS.

/ OVB    0.00   11.28  11.28            OVER                                P
L

/       11.28   22.56  11.28            ARSI CR    SN= LM //                P  0 LM      70                    L+
L                                          3A    SI+       8
R       11.28   22.56      THE TOP IS HIGHLY BROKEN AND STAINED DUE TO SURFACE WEATHERING.

/       22.56   31.41   8.85            BRHT CR    *C(    R*         MV8   P  1 LM                      <(    P+
L                                          2A        B*    9       KP1
R       22.56   31.41      ARGILLIC BRECCIA FRAGMENTS GRATER THAN 50CMS ARE HIGHLY
R       22.56   31.41      CARBONACEOUS, AND MAY REPRESENT INTERCALATED BEDDING WITHIN THE
R       22.56   31.41      BRHT UNIT.  RATHER THAN ARGILLIC BRECCIA.

/ SHR   31.04   31.41   0.37          X BRHT GR    *C(    R*         MV8   R  1 LM          <1          <(    D=
L

/       31.41   34.00   2.59            SAND SF    SN9 MX    1 3 9 6       P                <+                D+
L                                          5A           LC
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K E Y	F -L-	F G	FROM	TO	INT	RECOV	MD	%	ROCK	TM	TM	GM1	TX	TX	F	C	%	M	ARG	RI	1	ID	AZM	DIP	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A 1	A 2
						R	Q	D	AGE	EV	RN	LC	TM	GM2	TX	TX	S	C	O	O	CHT		2	ID	AZM	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA		
R			31.41	34.00					THE MASSIVE SANDSTONE CONTAINS CARBONACEOUS ARGILLITE WITHIN THE																													
R			31.41	34.00					INTERSTITIAL SPACES. THE ARGILLITE IS ALSO OBSERVED AS VERY																													
R			31.41	34.00					THIN, HIGHLY CONVOLUTED, WISPY LAYERS WITHIN THE SANDSTONE.																													
/			34.00	39.10	5.10					BRHT	CR		*C)		F*					NR7	P				<)				<(		D+					
L												3A		R*	G; 3					LP2																
R			34.00	39.10					CHERT FRAGMENTS SHOW SLIGHT GRADING INDICATING TOPS ARE IN AN																													
R			34.00	39.10					UPHOLE DIRECTION.																													
/			39.10	83.56	44.46					ARGL	CR		SN(	MX	LM	1	1	1		P	0	LM		U80				<(		L+						
L												N			G; 9																						
R			39.10	83.56					THE ARGILLITE IS EXTREMELY CARBONACEOUS, GIVING IT A STRIKING																													
R			39.10	83.56					BLACK COLOUR. PYRITE REPLACES THIN CHERT LAMINATIONS, AND																													
R			39.10	83.56					EXHIBITS NORMAL GRADING. THIS UNIT IS TYPICAL OF THE CANOL 3B																													
R			39.10	83.56					UNIT.																													
/			43.58	44.31	0.73			8	BRHT	CR		*C)								LM3	R								<(		R=					
L												1A		H*	R* 3					KL1																
R			43.58	44.31					THE HETEROLITHIC BRECCIA OCCURS IN THE SAME MATRIX AS THE ABOVE																													
R			43.58	44.31					ARGILLITE. THE CHERT FRAGMENTS HAVE UNDERGONE CONSIDERABLE																													
R			43.58	44.31					REPLACEMENT BY PYRITE.																													
/	SHR		52.12	55.47	3.35				X	ARGL	GR		GG+	MX	LM	1	1	1		R	0	LM		U80				<(		L+						
L																																						
/			57.76	60.15	2.39			9	BRHT	CR		*C+		R*					LP2	R								<(		R=					
L												1A		H*	F*					LO2																
/			61.26	61.78	0.52				X	ARGL	CR		SN(	MX	LM	1	1	1		R	0	LM		U78	<=			<(		L+						
L																																						
/	SHR		77.42	81.50	4.06				X	ARGL	CR		GG1	MX	SK	1	1	1		R	0	LM		U80	<=			<(		<=						
L																																						
R			77.42	81.50					STOCKWORK PYRITE VEINING OCCURS IN A SHEARED ARGILLITE.																													
/			81.50	83.56	2.06				X	ARGL	CR		SN(	SK	LC	1	1	1		R	0	V/		U79	V2			<(		D+						
L															BR															B+						
R			81.50	83.56					STOCKWORK QUARTZ VEINING OCCURS IN A MILDLY BRECCIATED ARGILLITE																													
R			81.50	83.56					THE QUARTZ VEINS CONFORM TO THE ARGILLIC LAMINATIONS.																													
/			83.56	84.02	0.46					SAND				BD	LC	1	3	6	3	P	2	LM		U83	<+					L=						
L												4A			G; 8																						
R			83.56	84.02					THE BEDDING WITHIN THE SANDSTONE IS MILDLY CONVOLUTED. PYRITE																													
R			83.56	84.02					LAMINATIONS ARE DUE TO REPLACEMENT OF THE COARSER, SAND SIZED																													
R			83.56	84.02					CHERT PARTICLES.																													
/			84.02	94.92	10.90					ARGL	CR		SN(	MX	LM	1	1	1		P	0	LM		U79						L+						
L												N			G; 9																						
/			84.02	94.92	10.90					2	BRHT	CR		*C1	G;	ND				KN1	R		C/	T78	<)					R=						
L												1A		H*	R* 3					KP2																

K E Y	F -L-	F R O M -	T O -	I N T	RECOV RQD	MD % AGE	ROCK EV	TM TM QM1 TM QM2	TX TX F C % M ARG LC	TX TX S C O O CHT	RI 1 2	ID AZM DIP	QZ FL CY CA BA XX PY CP GL YY MG MU CL SD QS HA PR MT SL HA	A 1 A 2
R		84.02	94.92										THE HETEROLITHIC BRECCIA INTERCALATES WITH THE ARGILLITE IN 30CM	
R		84.02	94.92										BEDS. THE CHERT FRAGMENTS ARE SUB-ANGULAR AND INCREASE IN SIZE	
R		84.02	94.92										GOING DOWNHOLE. MINOR SHEARING OF THE ARGILLITE OCCURS AT 92.05	
R		84.02	94.92										METERS. QUARTZ-PYRITE VEINS OCCUR NEAR THE BOTTOM OF THE P.G.I.	
/		94.92	109.72	14.80			BRHT	*C G:	LU6	P			<* R+	
L							5A	F* R* 2	LP3				<*	
R		94.92	109.72										SILTY ARGILLITE FRAGMENTS OF GREATER THAN 60CMS ARE RAFTED IN A	
R		94.92	109.72										CHERT BRECCIA. COMPACTION OF CHERT BRECCIA RESULTS IN PRESSURE	
R		94.92	109.72										SOLUTION BETWEEN GRAIN BOUNDARIES. THE FRAGMENTS ARE ANGULAR.	
R		94.92	109.72										BOTH REVERSE AND NORMAL GRADING OF BRECCIA FRAGMENTS OCCUR,	
R		94.92	109.72										HOWEVER THE FORMER IS DOMINANT.	
/		94.95	97.04	2.09		X	BRHT	*C G:	LU6	R			<) R+	
L													V+	
R		94.95	97.04										SIDERITE VEINS CUT THROUGH FRACTURED CHERT FRAGMENTS. IN LARGE,	
R		94.95	97.04										CHERT CLAST ARE COMPLETELY REPLACED BY FINE GRAINED PYRITE.	
/		109.72	122.40	12.68			SAND CR	SN8 G; BD 1 3 8 6		P 2 BD		U78	<) L+	
L							4A	SI1	LC 8					
/	FLT	112.72	113.08	0.36		X	SAND CR	G67 G; BD 1 3 8 6		R 2 BD		U78 V1	L+	
L							4A	SI1	LC 8					
/		117.96	122.40	4.44		5	BRSN CR	SN6 G; B*		KN2	R		R)	
L							4A	*C* R* LC 5		KN2				
R		117.96	122.40										WISPY, CONVOLUTED ARGILLITE LAMINATIONS OCCUR THROUGHOUT THE	
R		117.96	122.40										SANDY BRECCIA.	
/		122.40	125.65	3.25			BRHM			MQ8	P		R+	
L							3A CR	3		JK+				
/		125.65	127.71	2.06			ARGL CR	1 1 1		P 0 LM		78	D)	
L							N	LM 9						
/		127.71	134.10	6.39			ARSI CR	SN2 DB LC 1 3 2 6		P 2 BD		74	L+	
L							1A	SI1	G; 7					
/		127.71	128.21	0.50		7	SAND CR	SN7 MX	0 3 7 3	R			D+	
L							3A	LC 8						
R		127.71	134.10										SAND AND SILT ARE INTERBEDDED WITH A MASSIVE BLACK, CARBONACEOUS	
R		127.71	134.10										ARGILLITE. PYRITE LAMINATIONS OCCUR WITHIN SANDY OR SILTY BEDS.	
/		128.42	132.20	3.78		1	BRHT CR			KM3	R		R+	
L							4A	G; 3		JL4				
R		128.42	132.20										HETEROLITHIC BRECCIAS ARE OFTEN ASSOCIATED WITH SANDY BEDS, AS	
R		128.42	132.20										THEY GRADE UP TO COARSER FRAGMENTS. THESE BEDS ARE	
R		128.42	132.20										APPROXIMATELY 5CMS WIDE. BETWEEN 129.85 AND 130.15 THE ROCK IS	
R		128.42	132.20										VERY PYRITIC (10-20%), AND WEATHERED.	
/		132.20	133.72	1.52		9	SAND CR	LM G; 1 3 9 5		R 0 LM		U50 <(	D1	
L							4A	8						

K E Y	F -L-	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	GM1 GM2	TX TX	TX TX	F S	C C	% D	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		132.20	133.72				THE SANDSTONE CONTAINS LARGE ARGILLIC CLASTS. IT IS POROUS AND																											
R		132.20	133.72				HEAVILY WEATHERED.																											
/		134.10	140.90	6.80				BRHM										MR8	P												R+		
L									3A	CR				2				JN+														
/		140.90	149.96	9.06				BRHT			*C=	G;	B*					NT6	P				<(								R+		
L									4A	CR		R*	ST					MQ3														
/		143.12	143.67	0.55			X	BRHT			*C=	G;	B*					NT6	R				<(								R1		
L									4A	CR		R*	VG					MQ3														
R		143.12	143.67				BOTH ARGILLITE AND CHERT CLASTS ARE GRADED NORMALLY, INDICATING																											
R		143.12	143.67				TOPS ARE IN AN UPHOLE DIRECTION.																											
/		149.96	167.68	17.72				ARGL	CR		SN(	MX		1	1	1		P	1	LM		65	<)							L+		
L									2A			LC	LM	9																		
R		149.96	167.68				THE CORE IS MODERATELY BROKEN THROUGHOUT THE INTERVAL.																											
/	FLT	151.49	154.53	3.04			X	ARGL	CR		GG1	MX		1	1	1		R	1	LM		65	<=							Q=		
L																																
/		158.90	159.87	0.97			7	BRHT	CR		*C)		R*					LO2	R												R=		
L									2A			F*						KO2														
R		158.90	159.87				THIS INTERVAL POSESSES A PEBBLY MUDSTONE MATRIX.																											
/		166.97	167.05	0.08			8	SAND	CR		SN9			1	3	9	3		R												D+		
L									3A					8																		
/		167.68	169.15	1.47				BRSN	CR		SN7		LC					KP2	P	2	BD		U68								<+		
L									3A			BD	G;	6				JL1														
/		169.15	213.06	43.91				ARSI	CR		SN2	LM	SS	1	3	2	3		P	1	LM		U78	<1						L)		
L									3A			LC																				
R		169.15	213.06				SAND OCCURS IN THIN LAMINATIONS AND/OR LENSES, THAT VARY FROM																											
R		169.15	213.06				1-3CMS. IN THICKNESS.																											
/		188.06	200.05	11.99			X	ARSI	CR		SN2	LM	SS	1	3	2	3		R	1	LM		U78	<*						<*		
L									3A																								
R		188.06	200.05				SMALL 5MM. TENSION GASHES OCCUR NORMAL TO BEDDING. THESE ARE																											
R		188.06	200.05				FILLED WITH QUARTZ AND PYRITE.																											
/		205.33	210.92	5.59			X	ARSI	CR		SN2	DB	XB	1	3	2	3		R	1	BD		U81	<+			<+			D)		
L													LC																				
R		205.33	210.92				THE SMALL MICROVEINS OF BARITE ARE ZONES OF WEAKNESS ALONG WHICH																											
R		205.33	210.92				THE CORE BREAKS.																											
/		210.92	213.06	2.14			X	ARSI	CR		SN2	BD	XB	1	3	2	3		R	1	BD		U80	V=			<+			D+		
L													LC																				
R		210.92	213.06				THE CORE IS HIGHLY BROKEN DUE TO BOTH QUARTZ AND BARITE VEINING.																											
K	UM1	213.06	213.06	0.00																												

K F	F R O M -	T O -	I N T	RECOV	MD %	ROCK	TM	TM	QM1	TX	TX	F	C	%	M	ARG	RI	1	ID	AZM	DIP	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A 1	A 2
E -L-	----.--	----.--	---.--	---.--	--	- ----	--	--	---	--	--	-	-	-	-	----	---	-	--	---	---	--	--	--	--	--	--	--	--	--	--	-	-
Y G				R Q D	AGE	EV	RG	LC	TM	QM2	TX	TX	S	C	O	O	CHT		2	ID	AZM	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA		

/	LSX	213.06	214.70	1.64			LMSX	SF		GG2	LM	LC				P	1	LM		77	L5			<*		B1		L+					
L								BA																						L2				
R		213.06	214.70		THE SILICEOUS LAMINATED SULPHIDE CONTAINS TWO LARGE ARGILLIC																														
R		213.06	214.70		BEDS, AT THE TOP AND THE BOTTOM OF THE INTERVAL. THESE BEDS ARE																														
R		213.06	214.70		ABOUT 10-20CMS. IN THICKNESS. THEY ARE BLACK, CARBONACEOUS AND																														
R		213.06	214.70		HIGHLY BROKEN. IN COMPARISON TO THE SILICEOUS, LAMINATED																														
R		213.06	214.70		SULPHIDE. THEY CONTAIN MORE SPHALERITE. WITHIN THE LAMINATED																														
R		213.06	214.70		SULPHIDE, THE SPHALERITE IS A RESINOUS BROWN COLOUR. IT OCCURS																														
R		213.06	214.70		AS MEDIUM SIZED CRYSTALS (.7MM). PYRITE / MARCASITES CONFORM TO																														
R		213.06	214.70		LAMINATIONS AND AVERAGE 3MM. IN SIZE.																														
/	LSX	214.70	216.35	1.65			LMSX	BA		LM						P	0	LM		78			L6		D+		L+					
L								BA			LC																			L2				
R		214.70	216.35		THE BARITE IS FINELY LAMINATED WITH PINK SPHALERITE, GALENA AND																														
R		214.70	216.35		BLEBS OF PYRITE. THE DIRTY GREY COLOUR IS DUE TO IMPURITIES																														
R		214.70	216.35		WITHIN THE BARITE. SPHALERITE LAMINATIONS AVERAGE 2MM, AND																														
R		214.70	216.35		GALENA LAMINATIONS AVERAGE .3MM IN THICKNESS. DARK GREEN																														
R		214.70	216.35		ARGILLITE BEDS (.5CM THICK) TOTAL 5% OF THE TOTAL INTERVAL																														
R		214.70	216.35		VOLUME.																														
/		216.35	216.71	0.36			LMSX	BA		LM						P	0	LM		78			L6		D+		L+					
L																																		
R		216.35	216.71		THIS INTERVAL IS THE SAME AS THE PRECEEDING INTERVAL, EXCEPT FOR																														
R		216.35	216.71		ITS FLUID NATURE.																														
/	FSX	216.71	217.73	1.02			FGSX			BR						P					L2		B1		D1								
L								BR		LC	SS																			L4				
R		216.71	217.73		THE ORIGINAL LAMINATED TEXTURE OF THE SULPHIDE IS DISTRUBED BY																														
R		216.71	217.73		BRECCIATION OF BOTH THE LAMINATED ORE AND THE SILICEOUS,																														
R		216.71	217.73		ARGILLIC INTERBEDS. THESE ARGILLIC INTERBEDS ARE 20% OF THE																														
R		216.71	217.73		TOTAL INTERVAL VOLUME. SPHALERITE OCCURS AS A YELLOW OR PINK																														
R		216.71	217.73		MINERAL. GALENA IS VERY FINE GRAINED, AND HIGHLY DISSEMINATED.																														
R		216.71	217.73		OVERALL, THE CORE IS A SOFT MUSH WHICH IS EASILY BROKEN BY THE																														
R		216.71	217.73		FINGERS.																														
/	LSX	217.73	218.25	0.52			LMSX	BA		LM						P	0	C/		65	L5		D1		L+								
L								BA		BR	LC																			L1				
R		217.73	218.25		GALENA OCCURS IN .2MM LAMINATIONS, WITH PINK SPHALERITE																														
R		217.73	218.25		LAMINATIONS SURROUNDING IT ON BOTH SIDES. BETWEEN 217.93 -																														
R		217.73	218.25		217.97 METRES, THE BARITE AND ARGILLITE BEDS BECOME BRECCIATED.																														
R		217.73	218.25		ARGILLIC INTERBEDS OF 2CM. THICKNESS, OCCUR THROUGHOUT THE																														
R		217.73	218.25		INTERVAL. THEY AMOUNT TO 25% OF THE TOTAL INTERVAL VOLUME. A																														
R		217.73	218.25		LARGE 15CM. ARGILLITE BED OCCURS AT THE END OF THE INTERVAL.																														
/	LSX	218.25	219.46	1.21			LMSX	BA		LM						P					L3		B1		D1								
L								BR		LC	SS																			L3				
R		218.25	219.46		THIS UNIT IS SIMILAR TO THE PRECEEDING LMSX EXCEPT THE ROCK																														
R		218.25	219.46		QUALITY IS VERY POOR. ORIGINAL LAMINATIONS ARE DIFFICULT TO SEE																														
R		218.25	219.46		DUE TO THE MUSHY CHARACTER OF THE CORE. ABOUT 30% OF THE TOTAL																														
R		218.25	219.46		CORE VOLUME IS COMPOSED OF SILICEOUS, BLACK ARGILLITE INTERBEDS.																														

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	GM1 TM	GM2	TX TX	F TX	C S	% C	M O	ARG O	CHT	RI	1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/ L	LSX	219.46	220.98	1.52			LMSX	SF BA		BD BR	LM								P	1	BD		67					<+		L1	L= L2			
R		219.46	220.98				THE LAMINATED SULPHIDE INTERCALUTES WITH BEDS OF SILICIFIED																														
R		219.46	220.98				ARGILLITE. THESE BEDS VARY FROM .4 - 4CMS IN THICKNESS, AND																														
R		219.46	220.98				CONTAIN A LARGE AMOUNT OF LAMINATED TO LENSOIDAL PYRITE /																														
R		219.46	220.98				MARCASITE. THESE ARGILLIC BEDS ARE 30% BY VOLUME, OF THE TOTAL																														
R		219.46	220.98				INTERVAL.																														
/ L		219.86	220.41	0.55			6 FGSX		60	BR									R									Q1		B=	D+ #2				
/ L		220.68	220.98	0.30			9 ARGL	SF BA		MX		9					11		R				<=					<)		B=	D) D+				
/ L		220.98	222.27	1.29			LMSX	BA BA		LC BR	LM								P	0	LM		68					L6		L(	L+ L1				
R		220.98	222.27				GALENA LAMINATIONS AVERAGE .2MM - .5MM. PINK SPHALERITE																														
R		220.98	222.27				LAMINATIONS AVERAGE 2MM. IN WIDTH. AT THE BASE OF THE INTERVAL																														
R		220.98	222.27				SLIGHTLY BRECCIATED, LIGHT GREY, SILICIFIED ARGILLITE BEDS																														
R		220.98	222.27				INTERBED WITH THE SULPHATE.																														
/ L		222.27	222.96	0.69				LMSX	BA	LC	LM								P	0	LM		70					L6		L(	L+				
/ L		222.96	224.56	1.60				LMSX	BA	LC	LM								P	0	LM		75					L5		L2	L+ L2				
R		222.96	224.56				ARGILLITE LAMINATIONS AVERAGE 3MM. IN WIDTH AND 5% OF THE																														
R		222.96	224.56				TOTAL INTERVAL VOLUME.																														
/ L		224.56	225.25	0.69				LMSX	BA	LC	LM								P	0	LM		67					L6		L(	L+				
/ L		225.25	226.00	0.75				LMSX	BA	LC	LM								P	0	LM		70					L6		L(	L+				
/ L		226.00	226.39	0.39				LMSX	BA	LC	LM								P	0	LM		88					L6		L(	L+				
/ L		226.39	227.27	0.88				LMSX	BA	LC	LM								P	0	LM		82					L6		L(	L+				
/ L		227.27	228.11	0.84				LMSX	BA	LC	LM								P	0	LM		64					L6		L(	L+				
/ L		228.11	229.21	1.10				LMSX	BA	LC	LM								P	0	LM		68					L6		L(	L+				
/ L		229.21	230.14	0.93				LMSX	BA	LC	LM								P	0	LM		63					L6		L(	L+				
/ L		230.14	231.05	0.91				LMSX	BA	LC	LM								P	0	LM		60					L6		L(	L+				

KEY	F -L- G	FROM ----.--	TO ----.--	INT ---.--	RECOV RQD	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	TX QM2	TX TX	F S	C C	% O	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1 A 2
/ L		231.05	232.20	1.15			LMSX	BA		LC	LM		P	0	LM		78								L6		L(		L+			
/ L		232.20	232.97	0.77			LMSX	BA		LC	LM		P	0	LM		81								L6		L(		L+			
/ L		232.97	233.97	1.00			LMSX	BA		LC	LM		P	0	LM		82								L6		L(		L+			
/ L		233.97	235.17	1.20			LMSX	BA		LC	LM		P	0	LM		80								L6		L(		L+			
/ L		235.17	235.99	0.82			LMSX	BA		LC	LM		P	0	LM		83								L6		L(		L+			
/ L		235.99	236.83	0.84			LMSX	BA		LC	LM		P	0	LM		82								L6		L(		L+			
L R		235.99	236.83	THE CORE IS HIGHLY BROKEN THROUGHOUT THE INTERVAL.																													
/ L		236.83	237.83	1.00			LMSX	BA		LC	LM		P	0	LM		79								L6		L(		L+			
/ L		237.83	238.83	1.00			LMSX	8A		LC LM	MX		P	0	LM		77								L7		L)		L) L=			
R		237.83	238.83	LAMINATIONS OF GALENA SURROUNDED BY YELLOW SPHALERTIE OCCUR IN A																													
R		237.83	238.83	FAIRLY MASSIVE BARITIC INTERVAL. THE SPHALERITE ENVELOPES THE																													
R		237.83	238.83	.2MM GALENA LAMINATIONS. THIS INDICATES A CYCLIC REPITITION OF																													
R		237.83	238.83	ORE FORMING PROCESSES. ARGILLIC INTERBEDS ARE VERY THIN, AND																													
R		237.83	238.83	AMOUNT TO LESS THAM 2% OF THE TOTAL INTERVAL VOLUME.																													
R		237.83	238.83	LAMINATIONS ARE FAIRLY NIDELY SPACED.																													
/ L		238.83	239.83	1.00			LMSX			LC	MX		P	0	LM		77								L7		L)		L)			
/ L		239.72	239.74	0.02		9	ARGL	SF 6A	SI=	LC	MX	1 2 = 2 9	R	0	C/		45								L7		L)		L)			
/ L		239.83	240.83	1.00			LMSX			LC	MX		P	0	LM		68								L7		L)		L)			
/ L		240.83	241.40	0.57			LMSX			LC	MX		P	0	LM		70								L7		L)		L)			
/ L		241.40	242.29	0.89			LMSX	8A 7A	SF	LC	LM		P	0	LM		69								L5		D+		L) L=			
R		241.40	242.29	THIN CONVOLUTED WISPS OF ARGILLITE INTERCALATE WITH THE SULPHATE																													
R		241.40	242.29	AND LUPHIDE LAYERS.																													
/ L		242.29	243.52	1.23			LMSX	8A 7A		LC	LM VG	BR	P	0	LM		70	<						L4		L+		B) L=			

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K  F  F R O M - T O -  I N T RECOV  MD % ROCK TM TM QM1 TX TX F C % M ARG   RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
E -L- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
Y  G                        R Q D  AGE EV RQ LC TM QM2 TX TX S C O O CHT      2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA

R       242.29  243.52      THICK 10CMS.  SILICEOUS ARGILLITE BEDS INTERCALATE WITH THE
R       242.29  243.52      SULPHATE.  THESE INTERBEDS ARE SLIGHTLY BRECCIATED AND
R       242.29  243.52      FRAGMENTED, WHICH RESULTS IN LARGE VARIATIONS IN BEDDING
R       242.29  243.52      THICKNESS.  LAMINAE CONVOLUTIONS ARE MORE OBVIOUS IN THE
R       242.29  243.52      ARGILLIC REGIONS.  THE LAST 42CMS. OF THIS INTERVAL IS MASSIVE
R       242.29  243.52      SULPHATE WITH VERY FEW SPHALERITE / GALENA LAMINTIONS.  THE
R       242.29  243.52      TOTAL VOLUME OF ARGILLITE GOES FROM 40% TO <5% IN THE LAST 42CMS

K LM1   243.52  243.52   0.00

/       243.52  249.02   5.50            ARSI       SI1 LM LC 0 2 1 2       P  1 LM      71 L=          L=    L+
L                                          3A              8                                  <*                L+

/       243.52  249.02   5.50          1 LMSX           LC LM               R  0 LM      72             L4    L+    B)
L                                          7A                                                                    L=
R SPC   243.52  249.02      SAMPLE D.G.  TAKEN AT 243.64 METRES.  ONE UNIDENTIFIED MINERAL
R       243.52  249.02      WAS FOUND IN SAMALL FRACTURES, WITHIN THE ARGILLITE.  CHOLORITE
R       243.52  249.02      IS ASSOCIATED WITH THE UNIDENTIFIED LIGHT BLUE MINERAL.
R       243.52  249.02      INTERCALATED BARITIC BEDS OCCUR THROUGHOUT THE ARGILLITE.  THE
R       243.52  249.02      BEDS AVERAGE 10 - 15CMS.  IN THICKNESS, AND AMOUNT TO 10% OF THE
R       243.52  249.02      TOTAL INTERVAL.  THE BEDS CONTAIN VERN THIN LAMINATIONS OF
R       243.52  249.02      QUARTZ, ARGILLITE, PYRITE AND SPHALERITE.
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G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6802

DRILLHOLE/TRAVERSE :	81-DH081	COLLAR ELEVATION:	1219.65	AZIMUTH(DEG) :	25.00	GEOLOGGED BY : HDG +
TOTAL DEPTH/LENGTH :	109.73	NORTHING(- IF S):	7002524.00	VERTICAL ANGLE :	-65.00	DATE (YY/MM/DD): 810917
CORE/HOLE DIAMETER :	HQ	EASTING (- IF W):	436837.19	CO-ORD SYSTEM :	UTM	PROJECT NUMBER : J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	34.44	23.00	-64.33
2	44.80	23.00	-64.00
3	46.65	23.00	-64.50
4	52.73	24.00	-64.25
5	58.82	24.25	-64.00
6	64.92	24.50	-63.75
7	71.01	24.00	-63.75
8	75.89	24.00	-63.00
9	77.11	26.00	-63.25
10	83.21	26.00	-63.25
11	89.30	25.00	-63.25
12	95.40	26.00	-63.00
13	101.49	25.00	-63.00
14	107.59	26.00	-62.25

KEY	FROM	TO	INTERVAL (UNITS = . DEC.PLACE) (MT=METRIC FT=FOOTRIC)	CORE RECOVERY	ROCK QUAL DESIG	FM AGE	MM OI	TYPE	TYPIFYING MIN 1	TYPIFYING MIN 2	QM1 MAT	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	GRAIN CHARACS M	ARG	PGI /RI	STRUCTUR-1 T	STRUCTUR-1 ID	STRUCTUR-1 STK	STRUCTUR-1 DIP	ALTERATION MINS H A	ALTERATION MINS H A	ALTERATION MINS H A	ALTERATION MINS H A	ALTERATION MINS H A	ALTERATION MINS ANY MIN	ORE-TYPE MINS H A	ORE-TYPE MINS H A	ORE-TYPE MINS H A	ORE-TYPE MINS H A	ORE-TYPE MINS ANY MIN	SUMMARY ALT -	SUMMARY ALT -	SUMMARY ORE -	SUMMARY ORE -
GAP	FROM-TO-																							QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY		A	1	A	2
KEY	FROM	TO	INTERVAL	ROCK QUAL DESIG	FM AGE	EN-VIR	Q	LC-COL	3		QM2	TX	TX	S	C	O	O	CHT						MG	MU	CL	SD	QS	HA	PR	MT	SL	HA					
EVENT														R			C			2			STRUCTUR-2	A	A	A	A	A	A	A	A	A	A		2		2	
R	SVY	0.00	0.00	THE HOLE WAS DONE BY MULTI-SHOT. WITH 3 SINGLE SHOTS. SO THEY																																			
R	SVY	0.00	0.00	WERE MERGED. SINGLE SHOT TAKEN AT 59.13M WAS DROPPED DUE TO A																																			
R	SVY	0.00	0.00	LARGE DISCREPANCY IN THE AZIMUTH READING.																																			
/	OVB	0.00	15.54	15.54				OVER											P																			
L																																						
/	WET	15.54	31.09	15.55				ARGL	CR		SN= MX			0	3	=	0	3	P					<)						<+								
L									1A						9																							
R		15.54	31.09	THE INTERVAL IS SOFT AND HIGHLY WEATHERED.																																			
/		31.09	32.31	1.22				LOST											P																			
L																																						
/		32.31	42.96	10.65				BRHM										NR8	P					<)						D+								
L									4A	CR					2			LN+																				
R		32.31	42.96	PYRITE OCCURS WITHIN THE SAND BANDS OF SILTY ARGILLITE FRAGMENTS																																			
R		32.31	42.96	AND AS A REPLACEMENT MINERAL IN CHERT CLASTS. THE ROCK IS																																			

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K  F  F R O M - T O -  I N T RECOV  MD % ROCK TM TM QM1 TX TX F C % M ARG   RI 1 ID AZM DIP QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
E -L- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
Y  G                         R Q D  AGE EV RQ LC TM QM2 TX TX S C O O CHT      2 ID AZM DIP MG MU CL SD QS HA PR MT SL HA

R        32.31   42.96      HIGHLY BROKEN.

/        38.88   39.29   0.41          9 SAND        SN8        0 4 8 4        R    BD       65                    D1
L                                            3A CR          BD 8
R        38.88   39.29      THIS SANDSTONE BED IS POSSIBLY A BRECCIA FRAGMENT.
R        42.96   43.51      PYRITE REPLACES CHERT FRAGMENTS.

/        42.96   46.73   3.77            BRHT                          LN2   P                E(                R=
L                                            3A CR                    KM1                                        R.

/        42.96   43.51   0.55          X BRHT                          LN2   R                E(                R2
L                                            3A CR                    KM1                                        R.

/        46.73   67.67  20.94            BRHT        *S) F* G;         OU6   P                                  R+
L                                            5A     *C+           )   MP3
R        46.73   67.67      PYRITE OCCURS AS A REPLACEMENT MINERAL IN CHERT CLASTS.  THE
R        46.73   67.67      LARGER FRAGMENTS ARE SILTY ARGILLITES.  GRADING OF BOTH CHERT
R        46.73   67.67      AND ARGILLITE FRAGMENTS INDICATES TOPS ARE POSSIBLY IN AN UPHOLE
R        46.73   67.67      DIRECTION.

/        67.67   79.92  12.25            BRHM CR                       LR6   P                          B(       D)
L                                            2A              2        LN)

/ FLT    67.69   68.06   0.37          X BRHM CR     GG8               LR6   R                          B(       D+
L                                            2A              2        LN)

/        69.00   69.36   0.36          6 BRHT     CR                   JK2   R                                  R1
L                                            3A              5        JK3

/        70.50   71.27   0.77          8 BRXX        *C+ R* G;         KN4   R                <*                R1
L                                                      H* B* 4        KM5

/ FLT    71.37   74.37   3.00          X BRHM CR CR GG4                LR6   R                <+       B( <(    D)
L                                            2A              2        LN)

/        78.22   78.41   0.19          7 SAND     CR SN8        0 4 8 5        R                                  D+
L                                            3A          BD    8
R        78.22   78.41      THIS COARSE SANDSTONE IS A PROBABLY A CLAST IN THE HOMOLITHIC
R        78.22   78.41      BRECCIA, BUT THE BROKEN NATURE OF THE CORE MAKES POSITIVE
R        78.22   78.41      IDENTIFICATION DIFFICULT.

/        79.92   86.04   6.12            SILT CR     SI8 BD G; 1 2 8 4        P  2 BD     U65 <(          M*    D*
L                                            2A     SN+ // MX 9
R        79.92   86.04      THE BEDDING MEASUREMENTS VARY FROM 50' - 73', THEREFORE IT IS
R        79.92   86.04      DIFFICULT TO DETERMINE WHETHER THE DARK, CARBONACEOUS SILTSTONES
R        79.92   86.04      REPRESENT A DEPOSITIONAL CYCLE, OR IF THEY ARE LARGE CLASTS.
R        79.92   86.04      THE BEDS OF MEDIUM GRAY SANDSTONES GRADING TO SILTSTONES, ARE
R        79.92   86.04      UNDISTURBED AND RANGE FROM 2CMS - 24CMS.  THE BLACK CARBONACEOUS
R        79.92   86.04      SILTSTONE ITSELF IS RELATIVELY MASSIVE.

/ SHR    81.11   82.92   1.81          6 BRHM     CR GG+               LN8   R                <=          <(    <+
L                                            4A          SK BR 3      JK)
```

K E Y	F -L-	F R O M	- T O -	I N T	RECOV MD % ROCK	TM TM QM1	TX TX F C % M ARG	RI 1 ID AZM DIP	QZ FL CY CA BA XX PY CP GL YY	A 1 A 2
					K Q D AGE EV RQ	LC TM QM2	TX TX S C Q Q CHT	2 ID AZM DIP	MG MU CL SD QS HA PR MT SL HA	
/		86.04	90.20	4.16	BRHT	SF	G; LS6	P V/ 30	V1 <* *+ B(	
L						4A	ST CC 3 JN1		<.	
R		86.04	90.20		THE SILICIFIED ARGILLITE FRAGMENTS SHOW REVERSE GRADING. THEY					
R		86.04	90.20		DECREASE IN AMOUNT GOING IN A DOWNHOLE DIRECTION, IN COMPARISON					
R		86.04	90.20		TO THE CHERT WHICH SHOWS A SLIGHT INCREASE IN AMOUNT.					
/		89.00	90.12	1.12	9 BRHT	SF *S)	LO3 R	V1	<* *1 B*	
L						4A	3) KN1		<+	
R		89.00	90.12		PYRITE COMMONLY OCCURS AS CLASTS AND CONCRETIONS THROUGHOUT THE					
R		89.00	90.12		INTERVAL. GALENA IS OBSERVED TO OCCUR AS SMALL 2 - 3MM CUBES					
R		89.00	90.12		WITHIN THE HETEROLITHIC MATRIX. SPHALERITE IS A DARK RESINOUS					
R		89.00	90.12		BROWN, AND APPEARS CONFINED TO QUARTZ VEINS.					
/		90.12	90.20	0.08	9 ARGL CR	BA	0 0 0 R 0 LM	59	<1 B1 B.	
L						1A	LM 9		B)	
R		90.12	90.20		THIS SMALL ARGILLIC BED IS VERY SOFT AND CARBONACEOUS.					
R		90.12	90.20		IT CONTAINS SMALL BARITIC LENSES, WHICH ARE RICH IN					
R		90.12	90.20		PYRITE/MARCASITE.					
K	UM1	90.20	90.20	0.00						
/	LSX	90.20	91.23	1.03	LMSX	SF	CH5 LM P 0 LM	65 <1	<+ L1 L=	
L						8A	LC BR		<1 L=	
R		90.20	91.23		THIS INTERVAL IS A LAMINATED CHERT, WITH THINLY LAMINATED, MORE					
R		90.20	91.23		ARGILLIC LAYERS INTERCALATING WITH PYRITE, SPHALERITE AND GALENA					
R		90.20	91.23		LAMINATIONS. PYRITE/MARCASITE VEINING WAS ASSOCIATED WITH THE					
R		90.20	91.23		BRECCIATION OF AN ARGILLIC BED, AT 91.12 METRES. MINOR FAULT					
R		90.20	91.23		OFFSETS ARE FILLED WITH QUARTZ.					
/	FSX	91.23	92.52	1.29	FGSX	SF	BR P	L4	B2 *1	
L						7R	LC		*3	
R		91.23	92.52		THE SULPHIDE IS HIGHLY FRAGMENTED AND BRECCIATED. SILICIFIED					
R		91.23	92.52		ARGILLITE CLASTS AMOUNTING TO 10% OF THE TOTAL INTERVAL ARE					
R		91.23	92.52		INCLUDED WITH SULPHIDE CLASTS. THE CLASTS CONTAIN LAMINATED					
R		91.23	92.52		QUARTZ AND SPHALERITE IN EQUAL AMOUNTS. THE OCCASIONAL, VERY					
R		91.23	92.52		THIN LAMINATION OF VERY FINE GRAINED GALENA, IS ALSO OBSERVED.					
R		91.23	92.52		GALENA IS MORE FREQUENTLY OBSERVED TO ASSOCIATE WITH					
R		91.23	92.52		MARCASITE/PYRITE PATCHES, AND IN SILICIFIED REGIONS SURROUNDING					
R		91.23	92.52		SULPHIDE FRAGMENTS. SPHALERITE VARIES FROM PINK TO YELLOW, AND					
R		91.23	92.52		IS FAIRLY FINE GRAINED. CARBONACEOUS ARGILLITE FRAGMENTS ARE					
R		91.23	92.52		PRESENT AT 91.81 METRES. THESE UNCONSOLIDATED FRAGMENTS CONTAIN					
R		91.23	92.52		SMALL PYRITE BLEBS AND QUARTZ MICROVEINS.					
/		92.05	92.29	0.24	8 CHER	SF	CH8 R	M8	B+ D(	
L						9N			D(	
/	LSX	92.52	93.42	0.90	LMSX		LC BR P 1 LM	65 L4	B1	
L						8R	SS		<1 L3	
/	FSX	93.00	93.23	0.23	7 FGSX		BR R	*4	B1	
L						8R	SS LC		<2 *3	

K E Y	F -L- G	FROM ----.--	TO ----.--	INT ---.--	RECOV ---.-- / ROD	MD % - AGE	ROCK EV	TM RO	TM LC	TM QM1 QM2	TX	TX	F S	C C	% M O O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		93.00	93.23		THE LAMINATED SULPHIDE IS HIGHLY DISRUPTED, RELUSTING IN HIGHLY																											
R		93.00	93.23		CONVOLUTED LAMINATIONS WHICH BECOME BRECCIATED TOWARDS THE																											
R		93.00	93.23		CENTRE OF THE INTERVAL. ARGILLIC CLASTS (2 - 3CMS IN SIZE)																											
R		93.00	93.23		AMOUNTING TO 10% BY VOLUME OF THE TOTAL INTERVAL, ARE																											
R		93.00	93.23		INTERSPERSED WITH LAMINATED SULPHIDE FRAGMENTS. WHERE THE																											
R		93.00	93.23		LAMINATIONS ARE CONVOLUTED BUT NOT BRECCIATED, THE ARGILLITE																											
R		93.00	93.23		INTERCALATES WITH THE SILICIOUS SULPHIDES.																											
/	LSX	93.42	94.78	1.36		LMSX	SF 7Y		LC LM BR				P		LM	61 L3										B1		B= L3			
R		93.42	94.78		THE TOP PART OF THIS INTERVAL IS SILICIOUS, WITH FROM 15 - 20%																											
R		93.42	94.78		FINE GRAINED SPHALERITE. GOING DOWNHOLE THE AMOUNT OF																											
R		93.42	94.78		SPHALERITE INCREASES TO 40%. THE CENTRAL 30CMS HAS BEEN REDUCED																											
R		93.42	94.78		TO A SOUPY MUSH, WITH NO DISTINGUISHABLE TEXTURES. IN THE MORE																											
R		93.42	94.78		ARGILLIC REGIONS THE SPHALERITE LAMINATIONS ARE LIGHT BROWN IN																											
R		93.42	94.78		COLOUR.																											
/	FSX	94.78	95.70	0.92		FGSX	SF 6A		BR SS				P			C2										B1		4+ B= C3			
R		94.78	95.70		FRAGMENT ARGILLITE IS FOUND IN A SILICIOUS SULPHIDE MATRIX.																											
R		94.78	95.70		ARGILLITE FRAGMENTS TOTAL 20% BY VOLUME. LAMINATE SULPHIDE																											
R		94.78	95.70		FRAGMENTS ARE INTERSPERSED AMOUNG THE ARGILLIC FRAGMENTS.																											
R		94.78	95.70		REMNANT BEDDING SUGGESTS THAT DISRUPTION IS LOCAL, WITH LITTLE																											
R		94.78	95.70		OR NO CLASTIC TRANSPORT. PYRITE/MARCASITE BLEBS INCREASE N SIZE																											
R		94.78	95.70		AND AMOUNT IN THE LOWER REGION OF THE INTERVAL. THE SPHALERITE																											
R		94.78	95.70		IS PREDOMINANTLY REDDISH BROWN AT THE TOP, VARYING TO LIGHT																											
R		94.78	95.70		YELLOW NEAR THE BOTTOM.																											
K	LM1	95.70	95.70	0.00																												
/		95.70	109.73	14.03		SILT	3A	CR	SI8 LM LC 1 2 8 3 SN+ MX				P	0	LM	62 <(		<*		D+								L=		
/		95.70	96.00	0.30	X	SILT	3A	CR	SI8 BR LC 1 2 8 3 SN+ MX				R	0	LM	62 <*		<+		D+								C=		
R		95.70	109.73		SLTY ARGL INTLAM + INTBD WITH CHT-BARITE LAM CONTAINING PYR + SL																											
/		96.00	104.55	8.55		4 SILT	1A	CR	SI6 LM LC 1 2 6 2 VG				R	0	LM	64 L=		L(		L=								L+		
R		96.00	104.55		CARBONACEOUS, LAMINATED SILTSTONE INTERCALATES WITH MORE MASSIVE																											
R		96.00	104.55		SILTSTONE IN BEDS THAT AVERAGE 10 - 35 CMS. THESE SILTSTONES																											
R		96.00	104.55		PART ALONG LAMINATIONS TO GIVE THE CORE A PLATY APPEARANCE.																											
R		96.00	104.55		A CYCLIC REPITITION OF QUARTZ, PYRITE AND SILTSTONE LAMINATIONS																											
R		96.00	104.55		OCCURS IN THE REPEAT INTERVAL. SPHALERITE DECREASES																											
R		96.00	104.55		DRAMATICALLY GOING DOWNSECTION.																											
/		104.55	106.01	1.46		4 SILT	6A	SF PY	SI6 LM LC 1 2 6 4 SN+ FD				R		LM	70 L2											L=			
R		104.55	106.01		THESE REPEAT INTERVALS ARE HIGHLY SILICIOUS AND PYRITIC. A																											
R		104.55	106.01		CYCLIC REPETITION OF QUARTZ, PYRITE AND SILTSTONE LAYERS IS																											
R		104.55	106.01		PRESENT.																											

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6B02

DRILLHOLE/TRAVERSE :81-DH082	COLLAR ELEVATION: 1363.11	AZIMUTH(DEG) : 30.00	GEOLOGGED BY : WJJ +
TOTAL DEPTH/LENGTH : 520.29	NORTHING(- IF S): 7004715.00	VERTICAL ANGLE : -75.00	DATE (YY/MM/DD): 810929
CORE/HOLE DIAMETER : NQHQ	EASTING (- IF W): 432979.12	CO-ORD SYSTEM : UTM	PROJECT NUMBER : JASON

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	173.74	39.00	-73.50
2	185.93	39.50	-74.00
3	198.12	39.00	-73.50
4	210.31	41.00	-73.50
5	222.50	44.00	-73.25
6	234.70	46.00	-73.00
7	246.89	44.00	-72.50
8	259.08	44.00	-72.00
9	271.27	45.00	-71.50
10	283.46	43.00	-71.00
11	295.66	44.00	-70.75
12	307.85	44.00	-71.00
13	320.04	44.00	-70.50
14	332.23	46.00	-70.00
15	365.76	46.50	-70.50
16	396.24	48.00	-70.00
17	426.72	46.50	-70.00
18	460.55	49.00	-69.00
19	476.10	49.00	-69.00
20	487.68	46.50	-70.00
21	518.16	44.00	-69.66

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   F   - I N T E R V A L -    CORE  T- %      TYPI- QAL  TEX-  GRAIN       PGI   STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS SUMMARY
K  L (UNITS =    .  DEC.PLACE)RECOV-  M M ROCK FYING MIN TURES CHARACS                      H  H  H  H  H ANY H  H  H ANY  ALT ORE
E  A  (MT=METRIC FT=FOOTRIC)  ERY    O I      TM TM MAT TX TX F C % M ARG  /RI T ID STK DIP  A  A  A  A  A MIN A  A  A MIN - - - -
Y  G  F R O M - T O -  I N T ( . )  D X TYPE  1  2 QM1  1  2 F F C A          1    AZM  RT QZ FL CY CA BA XX PY CP GL YY  A 1 A 2
- --- ----.-- ----.-- ---.-- ---.-- -- - ---- -- -- --- -- -- - - - - ---- --- - -- --- --- -- -- -- -- -- -- -- -- -- -- -- - - - -
K  F                          ROCK   FM     RT    TM QM2 TX TX S C O O CHT      T ID STK DIP MG MU CL SD QS HA PR MT SL HA
E  L                          QUAL   AGE EN- Q LC- 3      3  4 O     /          2    AZM  RT H  H  H  H  H  H  H  H  H  H   1   1
Y  G                          DESIG      VIR   COL            R     C             STRUCTUR-2  A  A  A  A  A  A  A  A  A  A    2   2

R SVY  173.74  332.23      REPRESENTS MULTI-SHOT DATA.
R SVY  365.76  520.29      REPRESENTS SINGLE-SHOT DATA.

/        0.00    3.66   3.66            OVER                                P
L

/        3.66   16.50  12.84            ARSI       SI= LM FS A F * H        P  1 LM      55                    L-
L                                            3A    SN+                            FS      55
R        3.66   16.50      HIGHLY FS NEAR TOP OF HOLE.

/       16.50   19.51   3.01            ARSN       SI1 SS (L A F 2 H        P  3 LM     U32                    B-
L                                            4A    SN3
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K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	EV	ROCK RQ	LC	TM TM QM1 QM2	TX TX F S	C C	% O O	M CHT	ARG	RI	1 2	ID	AZM	DIP	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A 1 A 2
R		16.50	19.51		LOAD CASTING INDICATES TOPS UPHOLE.																										
/		19.51	143.20	123.69				ARSI		SI= LM FL	A	F	1	H		P	1	LM		62							B-				
L									3A	SN1 SC SS								SC		70											
R		19.51	143.20		SC EVIDENT IN ARG ONLY. SS LIGHT. PY OCCURS MAINLY IN SN.																										
/		37.12	37.58	0.46			X	ARSN		SI2 BD	SC	A	F	6	H	R	3	BD		62							B*		B.		
L									3A	SN4 SS								SC		70											
/		63.94	64.75	0.81			X	ARSN		SI2 BD	SS	A	F	5	I	R	3	BD		65							B*				
L									4A	SN3 FL																					
/		67.22	68.22	1.00			X	ARSN		SI2 BD	SS	A	F	6	I	R	3	BD		68	V=						B*				
L									4A	SN4																			<.		
/		95.65	96.40	0.75			X	ARSN		SI2 BD	SS	A	F	7	I	R	3	BD		72	<+						B*				
L									5A	SN5																					
/		97.57	98.15	0.58			X	ARSN		SI1 BD	SS	A	F	5	I	R	3	BD		66							B*				
L									5A	SN4																					
/		116.35	122.10	5.75			X	ARSI		SI= SS	SC	A	F	1	H	R	1	CV	80	62	V-						B-				
L										BD								BD	18												
R		116.35	122.10		SS STRONGER CAUSING DISRUPTION OF BEDDING. BEDDING ANGLE IS																										
R		116.35	122.10		APPROXIMATED. CV IN STRUC ID IS SC.																										
/		122.10	123.28	1.18			X	ARSI		SI= SS	SC	A	F	1	H	R	1	CV		85							B-				
L										LM BD								LM		50											
R		122.10	123.28		SS STRONGER CAUSING DISRUPTION OF BEDDING. CV IN COL 49 50 IS																										
R		122.10	123.28		SC.																										
/		128.73	130.88	2.15			X	ARSI		SI= SS	SC	A	F	1	H	R	1	CV		65							B-				
L										LM BD								LM		45											
R		128.73	130.88		SS STRONGER CAUSING DISRUPTION OF BD LM. LM LESS EFFECTED. CV																										
R		128.73	130.88		IN COL 49 50 IS SC.																										
/		130.88	133.70	2.82			X	ARSI		SI= SS	SC	A	F	1	H	R	1	CV		85							B-				
L										LM BD								LM		26											
R		130.88	133.70		SS STRONGER CAUSING DISRUPTION OF BD. LM LESS EFFECTED.																										
/		133.70	136.08	2.38			X	ARSI		SI= SS	SC	A	F	1	H	R	1	CV		85							B-				
L										LM								LM		85											
/		136.08	140.28	4.20			X	ARSI		SI= SS	SC	A	F	1	H	R	1	CV		85							B-				
L										LM								LM		45											
/		140.28	143.20	2.92			X	ARSI		SI= SS	SC	A	F	1	H	R	1	CV		85							B-				
L										LM BD								LM		80											
/		140.57	140.79	0.22			X	GOUG								R															
L																															

K E Y	F -L-	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	TX QM2	TX TX	F S	C C	% O O	M O O	ARG CHT	RI	1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	MT	GL SL	YY HA	A 1	A 2
R		140.57	140.79		CORE BROKEN UP. POSSIBLE FAULT ZONE.																														
/		143.20	317.72	174.52			ARSI			SI2	LM	SS						P	2	LM		65						B*						
L								3A		SN1																								
/	VEN	143.20	143.55	0.35			3 VEIN			SD1	MX		A	A		A		R													D-			
L								W																			>X			D-			
R		143.20	317.72		INCREASE IN SI SN CONTENT. LIGHT SHEARING MAY BE SS PARALLEL BD																														
/	VEN	145.45	145.95	0.50			X VEIN				MX		A	A		A		R							<X									
L								W																										
R		145.45	145.95		REDUCED TO NQ CORE SIZE AT 147.22M																														
/		150.32	153.68	3.36			X ARSN			SN4	BD	SS	A	F	6	F		R	4	BD		70				V=		D-						
L								5A		SI2																								
/	VEN	156.30	156.83	0.53			6 VEIN				MX		A	A		A		R													D*			
L								W																			>X						
/	VEN	165.90	166.57	0.67			4 VEIN				MX		A	A		A		R													D*	D.		
L								W																			>8						
/		204.22	205.10	0.88			X ARSN			SN5	BD	SS	A	F	7	G		R	4	BD		72	V+					D.						
L								5A		SI2																								
R		204.22	205.10		SN CONTAINS FINE SI LAMS.																														
/		269.53	270.53	1.00			X ARSN			SN3	BD	SS	A	F	4	G		R	4	BD		55	>1					D(	D.					
L								4A		SI1																			D*					
R		269.53	270.53		SN BEDS CONTAIN FINE SI LAMS.																														
/		273.24	273.76	0.52			X ARSN			SN6	BD	SS	A	F	8	G		R	5	BD		70						D.						
L								5A		SI2																			D*					
R		273.24	273.76		SN BEDS CONTAIN FINE SI LAMS.																														
/		278.41	281.22	2.81			X ARSN			SI1	BD	SS	A	F	5	G		R	2	BD		60						D.						
L								4A		SN4																								
R		278.41	281.22		SN BEDS CONTAIN FINE SI LAMS.																														
K	FLT	312.90	312.90	0.00																														
/	FLT	312.90	314.25	1.35			X FAUL			GG9								R																
L																																		
/		317.72	322.60	4.88			ARSN			SI1	BD	SS	A	F	6	G		P	2	BD		60	<.					D(						
L								5A		SN5																								
K	FLT	320.82	320.82	0.00																														
/	FLT	320.82	320.85	0.03			4 FAUL			GG4								R		F/		60												
L																																		
/		322.60	324.53	1.93			ARSI			SI+	LM	BD						P	1	LM		65	<=					6(						
L								4A		SN2	SS																								

K E Y	F -L- G	FROM	TO	INT	RECOV RQD	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX	TX	F S	C C	% O	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		324.53	328.23	3.70			ARSN			SI1	BD	SS	A	F	5	G		P	2	BD		60							D(					
L									5A	SN4																								
R		324.53	328.23	PY DISS MAINLY IN SI SN BEDS.																														
/		328.23	332.38	4.15			ARSI			SI+	LM	BD	A	F	2	G		P	1	LM		68	<*						8*					
L									4A	SN2		SS																						
/		332.38	333.15	0.77			SAND			SI1	MX		D	F	9	H		P					V+		D-									
L									6A	SN9																								
R		332.38	333.15	TRACE CA IN LOWER HALF OF UNIT.																														
/		333.15	337.87	4.72			ARSI			SI*	LM	BD	A	F	1	G		P	1	LM		60	<*		D-				D(					
L									4A	SN1	SS																								
/		337.87	338.78	0.91			ARSN			SI1	BD	LM	A	F	7	G		P	3	LM		50	<)						D*					
L									5A	SN6	SS																							
R		337.87	338.78	SOME SAND BEDS HAVE SILT ARGL LAMS.																														
/		338.78	359.41	20.63			ARSI			SI+	LM	BD	A	F	2	G		P	2	LM		70	V)						D*					
L									4A	SN2	SS																							
/		343.20	345.13	1.93		X	ARSI			SI+	LM	BD	A	F	2	G		R	2	LM		85	>)						D*					
L									4A	SN2	SS															<(								
K	FLT	354.14	354.14	0.00																														
/	FLT	354.14	354.63	0.49		X	FAUL			GG8								R																
L																																		
/		359.41	363.03	3.62			ARSN			SI1	BD	LM	A	F	6	G		P	3	LM		58	<*						D*					
L									5A	SN5	SS																				D-			
R		359.41	363.03	SL OCCURS IN SAND BED. WITH PY. SILT, ARG & LM IN SN BD.																														
/		363.03	373.30	10.27			ARSI			SI=	SS	LM	A	F	3	G		P	2	LM		55	>=						D*					
L									5A	SN2	CG	BD																			D-			
R		363.03	373.30	OCCASIONAL CG DUE TO SS CAUSING DISRUPTION OF BEDS. QTZ > HAVE																														
R		363.03	373.30	CAUSED MINOR BRECCIATION. TRACE SL OCCURS IN THE QTZ.																														
/		373.30	375.76	2.46			ARSN			SI=	BD	SS	A	F	7	G		P	3						V)				D*					
L									5A	SN8																								
/		375.76	376.20	0.44			SAND				MX		F	F	9	G		P												D-				
L									6A																									
/		376.20	377.44	1.24			ARSN			SI=	SS	LM	A	F	4	G		P	2															
L									4A	SN4																<*								
R		376.20	377.44	SS OR SH HAS DISRUPTED THE BEDS GIVING A CG TEXTURE IN PLACES.																														
/		377.44	378.61	1.17			SAND	AR		SI=	MX		A	F	9	G		P						V*		<.								
L									6A	SN9																								

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	QM2	TX TX	F S	C C	% O	M D	ARG CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		378.61	380.28	1.67			ARSN			SI= LM BD								P	2 LM		60	V1		<.								
L									4A	SN3 SS																							
R		378.61	380.28		SS OR SH HAS DISRUPTED BD GIVING AN OCCASIONAL CG TEXTURE. LM																													
R		378.61	380.28		VARIES FROM 50 TO 90 DEGREES.																													
/		380.28	382.60	2.32			SAND	AR		SI= MX		A	F	9	G			P											D*				
L									6A	SN9																V)							
/		382.60	387.00	4.40			ARSN			SI= LM BD		A	F	4	G			P	LM		70	V*							D*				
L									4A	SN3 SS																							
R		382.60	387.00		PY DISS MAINLY IN VEINS AND SI OR SN.																													
/		383.70	383.71	0.01			X ????											R	LM		90												
L																																	
/		386.99	387.00	0.01			X ????											R	LM		80												
L																																	
/		387.00	389.22	2.22			SAND	AR		SI= MX LM		A	G	7	G			P	2 LM		40	>2		<-			SE		D-				
L										SN7																	S(						
R		387.00	389.22		ARG OCCURS AS LAMS.																													
/		389.22	413.08	23.86			ARSI			SI= LM BD		A	F	2	G			P	2 LM		64	<-							D-				
L									4A	SN2 SS																					B.		
R		389.22	413.08		SL OCCURS AS A BLEB IN A QZ <.																													
/		396.96	401.02	4.06			7 VEIN											R				>7					SE		B.				
L									W																		S)		B-				
R		396.96	401.02		SL OCCURS AS BLEBS SCATTERED THROUGHOUT THE QZ.																													
/		404.47	406.40	1.93		X	ARSI			SI= LM BD		A	F	2	G			R	2 LM		90	<-							D-				
L																																	
/		407.73	408.60	0.87		X	ARSI			SI= LM BD		A	F	2	G			R	2 LM		90	<-							D-				
L																																	
/		409.90	411.50	1.60		X	ARSI			SI= LM BD		A	F	2	G			R	2 LM		90	<-							D-				
L																																	
/		413.08	414.64	1.56			SAND	AR		SI= LM MX		A	F	9	G			P	1 LM		68			<*					D.				
L									6A	SN8																V)				B.			
R		413.08	414.64		SL OCCURS AS DISS BLEBS IN QS VEINS. ARGL OCCURS AS STRETCHED																													
R		413.08	414.64		LAMS.																													
/		414.64	418.14	3.50			ARSI			SI= CG SS		A	F	3	G			P											D-				
L									4A	SN2																V+							
R		414.64	418.14		SH OR SS HAS DISRUPTED LM AND BD PRODUCING A STRETCHED PEBBLE																													
R		414.64	418.14		CONGLOMERATE TEXTURE. MINOR FAULT OCCURS AT 47.60M.																													
/		418.14	419.70	1.56			SAND	AR		SI1 MX		A	F	9	G			P											D.				
L									6A	SN8																<*				B-			

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX TX	F S	C C	% M O O	ARG CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		418.14	419.70																												
R		418.14	419.70																												
							ARGL OCCURS AS SHEARED DISRUPTED BEDS. SL IS MAINLY ASSOCIATED																							
							WITH QZ <.																								
/		419.70	430.26	10.56			ARSI			SI+	BD	SS	A	F	2	G		P		BD		60				D*					
L								4A		SN2	CG																				
R		419.70	430.26				SH OR SS HAS DISRUPTED BD AND LM, PRODUCING A STRETCHED PEBBLE																								
R		419.70	430.26				CONGLOMERATE TEXTURE. PY OCCURS MAINLY IN THE SN SI BEDS.																								
/		420.42	421.02	0.60			X SAND			SI1	MX		C	F	9	G		R									D.				
L								6A		SN9																					
/	VEN	425.50	426.35	0.85			6 VEIN	AR		QZ6							AA3	R									D- B.	B.			
L								W		SN3														>6			B-				
R		425.50	426.35				SL, GL, CP OCCUR IN QZ.																								
/		430.26	431.47	1.21			SAND	AR		SI2	MX		A	F	7	G		P				V)		<*							
L								6A		SN7																					
R		430.26	431.47				ARGL OCCURS AS DISRUPTED LAMS.																								
/		431.47	433.14	1.67			ARGL			SI+	MX	BD	A	F	=	G		P	3								D*				
L								3A		SN+	SS													V)							
R		431.47	433.14				SI SN BEDS DISRUPTED BY SS SH.																								
/		433.14	435.30	2.16			SAND			AR=	MX	LM						P	1	LM		90				D*					
L								6A		SI2																					
R		433.14	435.30				LAMS FOLDD AND DISRUPTED DUE TO SS SH OBSCURING ORIGINAL SED																								
R		433.14	435.30				FEATURES. LM ATTITUDE VARIES FROM 90 TO 60 DEGREES.																								
R		435.30	438.40				BEDDED WITH SI SN BEDS UP TO .60M THICK TMODE 3																								
/		435.30	443.96	8.66			ARSI			SI=	LM	BD	A	F	2	G		P	1	LM		64				D(					
L								3A		SN2	SS																				
R		440.60	442.57				LAMINATED WITH SI SN. TMODE 1.																								
/		443.96	450.70	6.74			ARSN			SI=	LM	BD	A	F	4	G		P	2	LM		60				D*					
L								4A		SN3	SS																				
R		443.96	450.70				CLOSELY LAMINATED WITH LAMS .2CM TO 2CM APART. FAINT ARGL LAMS																								
R		443.96	450.70				OCCUR IN THICKER (3CM) SI SN BEDS.																								
/		450.70	453.54	2.84			ARSI			SI+	MX	LM	A	F	1	G		P	1	LM		75				D-					
L								3A		SN1	SS														<-		B.				
R		450.70	453.54				SL OCCURS IN QS <.																								
/		451.26	451.67	0.41			X SAND			SI1	MX	LM	D	F	9	G		R		C1		80				D*					
L								6A		SN9															<*		B.				
R		451.26	451.67				SL OCCURS IN QS <. FAINT DISTORTED ARGL LAMS.																								
/	VEN	453.00	453.50	0.50			X VEIN			AR)	MX	VG	A	A		A		R													
L								W		SD=																					
/		453.54	468.05	14.51			ARSN			SI1	LM	BD	A	F	4	G		P	2	LM		68				D-					
L								4A		SN3	SS														<*						

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	TM QM1 QM2	TX TX	TX S	F C	% C	M O	ARG U	CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		454.43	455.06	0.63			X SAND			SI2	MX	LM	A	F	9	G		R		C/		50							D*				
L								6A		SN7										LM		60					<1						
R		454.43	455.06		FAINT ARGL LAMS.																												
/	VEN	455.20	455.33	0.13			X VEIN	QZ	SD		BR	VG	A	N	2	N		R											D*				
L								N																									
R		455.20	455.33		FRAGS CONSIST OF ARGL SAND FROM WALLROCK.																												
/		456.53	457.33	0.80			X SAND			SI1	MX		D	F	8	G		R		C/		80							B.				
L								6A		SN7																	V2						
/	VEN	463.72	463.97	0.25			X VEIN	QZ	SD		BR	VG	A	O	1	O		R											B*				
L								N																					B.		B(		
R		463.72	463.97		FRAGS CONSIST OF ARGL SAND FROM WALLROCK.																												
/		468.05	469.40	1.35			ARSN			SI1	BD	LM	A	F	8	G		P	4	LM		62	V*						B*				
L								5A		SN7	SS	LC																	B.				
R		468.05	469.40		FINE ARGL LAMS, SOME CONVOLUTE, OCCUR IN THE SAND BEDS.																												
/		469.40	503.77	34.37			ARSN			SI2	LM	BD	A	D	5	G		P	2	LM		70							D*	D.			
L								4A		SN3	SS																V)		B.		D.		
R		469.40	503.77		SILT OCCURS AS DISCREET LAMS AS OPPOSED TO BEING MIXED IN WITH																												
R		469.40	503.77		THE SAND BEDS AS HAS BEEN THE CASE ABOVE.																												
/		503.77	510.10	6.33			ARSI			SI=	BD	LM	A	D	3	G		P	4	BD		U75	<*						D-				
L								4A		SN2	SS																	D.					
R		503.77	510.10		SILT OCCURS AS DISCREET LAMS IN ARGL AND SAND. SHARP CONTACT																												
R		503.77	510.10		BETWEEN SM AR ON DOWNHOLE SIDE OF SN BED AND FAINTLY GRADATIONAL																												
R		503.77	510.10		CONTACT ON UPHOLE SIDE. SOME SN BEDS FINE UPHOLE, OTHERS ARE																												
R		503.77	510.10		MASSIVE.																												
/		510.10	519.85	9.75			ARSI			SI1	LM	SS	A	D	2	G		P	2	LM		62							D*				
L								3A		SN1																	V-						
R		510.10	519.85		OCCASIONAL SAND BED UP TO 3CM GRADES UPHOLE.																												
/		519.85	520.29	0.44			MISS												P														
L																																	

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6B02

DRILLHOLE/TRAVERSE :	81-DH083	COLLAR ELEVATION:	1188.12	AZIMUTH(DEG) :	355.00	GEOLOGGED BY : BHO +
TOTAL DEPTH/LENGTH :	332.23	NORTHING(- IF S):	7002421.00	VERTICAL ANGLE :	-77.00	DATE (YY/MM/DD): 810926
CORE/HOLE DIAMETER :	HQ	EASTING (- IF W):	436918.44	CO-ORD SYSTEM :	UTM	PROJECT NUMBER : J-MAIN

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	41.76	357.00	-76.00
2	62.29	358.00	-76.25
3	75.90	2.00	-75.50
4	91.44	4.50	-75.00
5	106.37	4.00	-75.00
6	127.41	8.00	-74.00
7	151.79	15.00	-73.00
8	167.34	18.00	-72.00
9	185.01	20.00	-72.00
10	201.17	21.50	-71.50
11	217.02	23.00	-71.25
12	231.65	23.00	-71.00
13	246.89	23.00	-70.00
14	276.76	26.50	-69.00
15	294.74	28.00	-67.33
16	313.03	29.00	-67.25
17	328.27	30.00	-66.75

KEY	F L A G	- INTERVAL - (UNITS = . DEC.PLACE) (MT=METRIC FT=FOOTRIC) FROM - TO -		CORE RECOV- ERY	T- % M O	M I	ROCK TYPE	TYPI- FYING TM	MIN TM	QAL MAT QM1	TEX- TURES TX	TX	GRAIN CHARACS F	C	%	M	ARG	PGI /RI	STRUCTUR-1 T	ID	STK	DIP	ALTERATION MINS H A	H A	H A	H A	H A	ANY MIN	ORE-TYPE MINS H A	H A	H A	ANY MIN	SUMMARY ALT -	ORE -
		INT (.)						1	2	QM1	1	2						1		AZM	RT	QZ	FL	CY	CA	BA	XX	PY	CP	GL	YY	A	1	A	2
		ROCK	FM							QM2	TX	TX	S	C	O	O	CHT		T	ID	STK	DIP	MG	MU	CL	SD	QS	HA	PR	MT	SL	HA				
		QUAL	AGE	EN-	Q		LC-	3		3	4		O				/		2		AZM	RT	H	H	H	H	H	H	H	H	H	H	1		1	
		DESIG		VIR			COL						R				C			STRUCTUR-2			A	A	A	A	A	A	A	A	A	A		2		2
/	OVB	0.00	13.60	13.60				OVER										P																	
L																																			
/		13.60	16.52	2.92				BRHM		CR							MP8	P														D+			
L									3A			SS	3		C	JK*																			
R		13.60	16.52	PYRITE IS ALSO SEEN AS A REPLACEMENT OF THE CHART <1%.																																
/		16.52	31.15	14.63				BRHT		CR *C)		F*					MR+	P														R+			
L									3A			SS	3		C	LN2																			
R		16.52	31.15	PYRITE OCCURS AS REPLACEMENT OF THE CHART. THESE ARE ALSO																																
R		16.52	31.15	PYRITE OR BEDDING SURFACES WITHIN SOME OF THE FRAGMENTS.																																
R		16.52	31.15	LARGE ARGL DO HAVE SILT LAYERING.																																
/	SHR	30.23	31.15	0.92			X	BRHT	GR	CR GG=		F*					MR+	R		FO		U80	7)								<)			
L																																			

K E Y	F -L-	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RG	TM LC	GM1 TM	TX GM2	TX TX	F S	C C	% O O	M CHT	ARG	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		30.23	31.15				THIS INTERVAL APPEARS TO BE A POSSIBLE FAULT ZONE BECAUSE OF																										
R		30.23	31.15				FAULT GOUGE MATERIAL AND FOLIATION OF THE MINERALS.																										
/		31.15	37.52	6.37			BRSN		SF	SN6	G; BD	2	4	8	7	KO2		P			U80	V+								D)	
L								6A		*H=	F*	BS			0	KN2									V.							
R		31.15	37.52				GRADING BEDDING INDICATES TOPS ARE UP THE DDH.																										
/		31.68	32.49	0.81			X VEIN					MX						R				>7								D(	
L								M																								
R		31.68	32.49				THIS VEIN COINTAINS APPROX 20% ARGL FRAGMENTS AND 10% SANDSTONE.																										
/		35.66	37.52	1.86			X BRSN		CR	SN6	G; BD	2	4	8	7	KO2		R			U80	>)			C.			D)			
L																																
R		35.66	37.52				AT APPROX 36.03 M THERE IS A QZ VEIN WITH A LIGHT BLUE MINERAL																										
R		35.66	37.52				COAT, POSSIBLE BARITE. PYRITE ALSO OCCURS AS BLEB DUE TO																										
R		35.66	37.52				REPLACEMENT OF THE CHERT.																										
/		37.52	48.77	11.25			BRHT		SF	SN+	F*					NS8		P				<(							D+		
L								3A	CR	*C*	SS	R*			C	LP1																
R		37.52	48.77				ARGL FRAGMENTS APPEARS TO DECREASE IN SIZE UP THE HOLE.																										
R		37.52	48.77				THERE IS A BRIGHT DARK BLUE-PURPLE STAIN ON FRACTURE																										
R		37.52	48.77				SURFACES, POSSIBLE DUE TO OIL.																										
/		48.77	57.50	8.73			BRXX		SF	*C*	F*	B*				LO7		P				V+							R+		
L								4A			R*	SS			C	KN2								V.					V.			
R		48.77	57.50				50% OF THE ARGL FRAGMENTS ARE ELONGATED WITH MOST OF THEM																										
R		48.77	57.50				ORIENTATED WITH THE LENGTH OF THE DRILL CORE. SPHALERITE OCCURS																										
R		48.77	57.50				IN VEIN IN FRACTURED ARGL CLAST. SILIFICATION APPEARS TO																										
R		48.77	57.50				INCREASE DOWN THE INTERVAL. QUARTZ VEINING IS CONCENTRATED																										
R		48.77	57.50				BETWEEN 58.25-56.96 M. THE INTERVAL APPEARS TO BE COARSE AT																										
R		48.77	57.50				BOTH THE TOP AND BOTTOM.																										
/		57.50	62.79	5.29			BRPM		SF	*C)	F*	R*				LR3		P				<*		C-					R)		
L								3A	CR	*S)			3		)	O KO2									C.							
R		57.50	62.79				IN THIS INTERVAL THE MATRIX IS A VERY FINE SILT AT THE BOTTOM																										
R		57.50	62.79				BUT GRADUALLY CHANGES INTO A FINE SAND. AT 61.03 M WE HAVE																										
R		57.50	62.79				A GRAPHIC JOINT WHICH REPRESENT A MINOR SHEAR ZONE.																										
R		57.50	62.79				THERE IS ALSOAPPROX 1% SANDSTONE FRAGMENTS.																										
/		62.79	85.53	22.74			BRHM		SF	PY	SI1	SS	SC			NR8		P											L+		
L								3A	CR						C									L*							
R		62.79	85.53				THE UPPER PART OF THIS INTERVAL HAS ABEDDING BUT SHOWS SLUMP																										
R		62.79	85.53				CLEAVAGE AND SOFT SEDIMENT DEFORMATION. THIS INDICATES THAT																										
R		62.79	85.53				IT HAS BEEN TRANSPORTED BUT NOT VERY FAR. ARGL FRAGMENTS																										
R		62.79	85.53				ARE ENLONGATED. PYRITE ALSO OCCURS AS PATCHES.																										
/	FLT	74.68	75.58	0.90			X BRHM		CR	PY	GG9	SS	SC			NR8		R											L+		
L																																
/		81.80	82.20	0.40			X BRHM		GR	PY	SI1	SS	SC			NR8		R											L+		
L																																

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R O D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	TX QM2	TX TX	F C S	% C D	M O O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		85.53	101.97	16.44			BRHT	SF	PY	*C=	R*					MT8	P										R+					
L								3A	CR	SI1		SS	3	=	(	KD=								C-								
R		85.53	101.97		THE ARGL FRAGMENTS HAS WELL DEFINED BEDDING SHOWN BY THE SILT																												
R		85.53	101.97		UNITS. AT 90.92 WE HAVE A 20 CM BAND OF BRPM.																												
/		101.97	108.84	6.87			BRHM	SF	PY			SS				MR8	P										L+					
L								3A	CR	*C(		R*			C	KN+												R.				
/	SHR	105.64	107.59	1.95		X	BRHM	GR	PY			SS				MR8	R										L+					
L								3A	CR	*C(		R*			C	KN+												R.				
R		105.64	107.59		WITHIN THE DITTO WE HAVE SEVERAL SMALL SHEAR ZONES CAUSED BY																												
R		105.64	107.59		SYN-TECTONIC DEFORMATION.																												
R		105.64	107.59		WITHIN THE PGI, PYRITE ALSO OCCURS AS REPLACEMENT OF THE CHERTS,																												
R		105.64	107.59		APPROX 1%. MINOR SPHALERITE AT 107.23 M; REPLACEMENT FEATURE.																												
/		108.84	115.02	6.18			BRHT	SF		*C=	F*	SS				LR8	P										D*					
L								3A	CR	SI=					C	KM=																
/		111.42	111.79	0.37		X	SAND	SF		SN6	LM		2	4	6	M	R	BD		80						D)					
L								4A	PY	SI3		LC	5																		
R		111.42	111.79		IN THIS PGI THERE APPEARS TO BE A MIXING OF A SLUMP BRECCIA																												
R		111.42	111.79		AND A TURBIDITE FACIES. WE ALSO HAVE A FEW MINOR SHEAR ZONES.																												
R		111.42	111.79		THERE IS A 15 CM FRAGMENT OF A CGCP AT 113.86 M.																												
/		115.02	117.78	2.76			SAND	SF	GR	SN6	LC		1	4	6	N	P										D)					
L								5A	CR	SI2		SS	5																		
R		115.02	117.78		WE HAVE 5% ARGL AND 2% CHERT FRAGMENTS.																												
/	SHR	115.27	116.32	1.05		X	SAND	GR	GR	SN6	LC		1	4	6	N	R										D)					
L																																
R		115.27	116.32		THERE ARE SEVERAL MINOR SHAER ZONES WITHIN THE INTERVAL.																												
R		115.27	116.32		PYRITE OCCURS ON THESE SLIPPAGE PLANES. THIS PGI COULD BE																												
R		115.27	116.32		A LARGE FRAGMENT.																												
/		117.78	122.22	4.44			BRHT		SF	*C+	R*					LS7	P										R)					
L								4A	CR	SN1		SS		1	C	KN1																
/		121.20	122.22	1.02		X	BRHM		CR			SS				LS9	R										D)					
L								3A	GR							KN)																
/		122.22	125.00	2.78			BRSN	SF		*C2	F*	R*	1	4	3	0 K02	P										R)					
L								5A		*S+		H*	3		+	0 K05																
R		122.22	125.00		THERE IS SEVERAL ARGL FRAGMENTS HICH APPEARS TO HAVE A REPLACEME																												
R		122.22	125.00		NT CORE OF CHERT.																												
/		125.00	151.70	26.70			BRHM	SF	CR	SN1	SS	SC				MS8	P										L+	D.				
L								3A	PY	*S+					+	C LO+													R-			
R		125.00	151.70		SAND CONTENT INCREASES TOWARDS THE BOTTOM OF THE INTERVAL.																												
R		125.00	151.70		SPHALERITE APPEARS TO BE A REPLACEMENT FEATURE OF THE CHART,																												
R		125.00	151.70		129.33 M. IT ALSO SEEN TO BE ASSOCIATED WITH FRACTURE AND																												

K E Y	F -L-	F R O M - T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	TX QM2	TX TX	F S	C C	% O O	M O	ARG CHT	RI	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		125.00	151.70																														
R		125.00	151.70																														
				VEINING, 135.97 M. SEVERAL MINOR SHEARS OCCURS WITHIN THIS INTERVAL.																														
/	FLT	135.54	135.94	0.40		X	BRHM	CR	CR	GG9	SS	SC			MS8	R														L+	D.	
L									CR																								
/		151.70	152.40	0.70			ARSI	SF		SN+	LM		0	2	9	L	P	1	BD		U70	<*								D)		
L								2A		S1=		BS	8																				
R		151.70	152.40																														
R		151.70	152.40	BEDDING IS VERY THINNLY LAMINATED AND APPEARS TO THE UPPER MOST PART OF A BOUMA SEQUENCE.																														
/		152.40	153.90	1.50			SAND	SF		SN6	//	IM	1	4	6	M	P	3	BD		U65	L*								D)		
L								5A		SI3	FU	BS	6																				
R		152.40	153.90																														
R		152.40	153.90	BEDDING IS WELL DEFINED NEAR BASE BUT IS DISRUPTED NEAR THE TOP.																														
/		153.90	155.60	1.70			CGPS	SF		SN5		BS	1	4	5	0	P														D)		
L								4A		SI2	FU	DB	4																				
R		153.90	155.60																														
R		153.90	155.60	THIS UNIT CONTAINS 20% ARGL FRAGMENTS AND 5% CHERT FRAGMENTS. THE CHARTS ARE MAINLY HYDROTHERMAL AND ARE FRACTURED.																														
/		154.56	154.78	0.22		X	CGPS	GR	CR	SN5		BS	1	4	5	0	R														D)		
L																																	
/		155.60	161.83	6.23			CGBR	SF		SN2	DB	F*	1	3	2	R	MR5	P													R)		
L								4A		*C2	R*	FU	2			0	K03																
R		155.60	161.83																														
R		155.60	161.83	WITHIN THE INTERVAL 151.70 TO 161.83 M WITH HAVE A BOUMA SEQUENCE WHICH FINING UPWARDS.																														
/		160.53	161.13	0.60		X	CGBR	GR	CR	SN2	DB	F*	1	3	2	R	MR5	R													R)		
L																																	
R		161.83	163.07																														
R		161.83	163.07	THERE IS APPROX 2% CHERT. THERE ARE ALSO 2 MINOR SHEAR ZONES WITHIN THIS INTERVAL.																														
/		161.83	185.28	23.45			BRHT	SF		*C2	F*	R*				LT5	P					>)									R)		
L								4A		SN1		H*	2		=	C	KP3								>.								
/		161.83	163.07	1.24		X	ARSI	SF		SI2	SS	SC	0	3	=	K	R														L+		
L									GR						7																		
R		161.83	185.28																														
R		161.83	185.28	THIS PGI CONTINS ARGL FRAGMENTS UP TO 2 METERS AND BRSN FRAGMENTS UP TO 7 METERS. IT ALSO CONTAINS ARSI FRAGMENTS WITH LAMINATED PYRITE UP TO 2.5%.																														
/		174.26	174.91	0.65		X	BRSN	SF		SN3	SS	SC	0	3	3	0	L05	R	2	BD		U65	<)								D-		
L								3A		SI1	LM	BS	5			0	JN)																
R		174.26	174.91																														
R		174.26	174.91	THIS APPEARS TO BE A LARGE FRAGMENT, BECAUSE OF SHARP CONTACTS. THE BOTTOM OF THIS INTERVAL IS WELL LALMINATED BUT THE UPPER SECTIO IS DISRUPTED.																														
/		185.28	216.99	31.71			BRHT	SF		*C=	SS	SC				MT7	P					V)									D)		
L								3A	PY	SN1	F*	H*	1		+	C	K01								V)						B-	
R		185.28	216.99	WITHIN THIS INTERVAL SANDSTONE FRAGMENTS RANGE UP TO 0.4 M																														

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	TX QM2	TX TX	F S	C C	% O	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		185.28	216.99		AND SHOW GRADING. PYRITE OCCURS AS A REPLACEMENT FEATURE0.03%.																													
R		185.28	216.99		APPROX 20% IS ARSN FRAGMENTS.																													
/		185.45	185.58	0.13			X	VEIN	SD	SF	*C=	SS	SC				MT7	R			>1						D-					
L																								>4				B-				
R		185.45	185.58		THIS INTERVAL CONTAINS TWO LARGE VEINS AND THE AREAS BETWEEN																													
R		185.45	185.58		AND NEAR THEM CONTAIN NUMEROUS MICRO-VEINS. IT IS HIGHLY FRACTU																													
R		185.45	185.58		RED. THE VEINS CONTAIN ARGL AND CHERT FRAGMENTS.																													
/		188.11	188.72	0.61			X	BRHT	GR	CR	GG3							R			<)						R)					
L																								<)								
/		216.99	220.20	3.21				BRPM	SF		SN3	F*		0	4	2	P LP4	P		U	V)						D)					
L									5A		*C=	B*	FU	4		=	K04							V-								
R		216.99	220.20		THE SAND CONTENT APPEARS TO INCREASE TOWARDS THE TOP THAT																													
R		216.99	220.20		THE FRAGMENTS DECREASE IN SIZE TOWARDS THE TOP.																													
R		216.99	220.20		QUARTZ VEINING APPEARS TO PRE NAD POST DATE BRECCIATION.																													
/		220.20	228.89	8.69				BRHM	SF		SI1	SS	SC	0	4	1	U NU8	P			<)						L)					
L									3A		SN=	F*	R*			)	K0+							<.					#*			
R		220.20	228.89		SPHALERITE IS CONCENTRATED AT 225.74 M AND APPEARS TO BE A																													
R		220.20	228.89		RESULT OF BRECCIA FILLING. THE ARGL FRAGMENTS ARE LARGE AND																													
R		220.20	228.89		ARE COMPOSED MAINLY OF ARSI. PYRITE ALSO OCCURS AS A																													
R		220.20	228.89		REPLACEMENT FEATURE.																													
/		228.89	233.53	4.64				BRPM	SF		SI4	SS	F*	0	5	1	R MR3	P			V-						P)					
L									4A		SN1	R*		3		+	KP1							<.								
/		233.53	235.10	1.57				ARSN	SF		SN4	SS	SC	0	5	4	M	P		BD	80	7-					D)					
L									4A		SI2			6										>.								
R		233.53	235.10		THIS INTERVAL COULD POSSIBLY BE A FRAGMENT. CONTACT IS RATHER																													
R		233.53	235.10		SHARE AND THE BEDDING CHANGES BY APPROX 10%. THE BEDDING																													
R		233.53	235.10		IS DISRUPTED DUE TO SLUMPING.																													
/		235.10	236.83	1.73				ARGL	SF				LM					P		BD	90	<-					D)					
L									2A				MX																			
R		235.10	236.83		THE UNIT IS MASSIVE, BUT FINALLY LAMINATED.																													
R		236.83	239.88		THE UNIT IS COMPETENT, BUT THE SHEARING IS TAKING PLACE ON THE																													
R		236.83	239.88		BEDDING SURFACES. BARITE IS COUNTING THESE SHEARS. THE BEDDING																													
R		236.83	239.88		ANGLE CHANGES SLIGHTLY NEAR THE BASE.																													
/		236.83	241.78	4.95				ARSN	SF		SN4	SS	SC	0	4	4	N	P			V)			C-		D)	#.	#.				
L									4A	CR	SI1			5						BD	90		V.									
/	SHR	236.83	239.88	3.05			X	ARSN	GR	CR	SN4	SS	SC	0	4	4	N	R			V)			C-		D)	#.	#.				
L									4A	CR	SI1			5						BD	90		V.									
/	FLT	240.03	240.20	0.17			X	ARGL	CR		GGX							R															
L									1A																								
R		240.03	240.20		THE CORE BELOW THIS INTERVAL IS BROKEN UP FOR APPROX 3 M.																													
/		241.78	245.54	3.76				ARGL		CR	SI=	SS	BD					P	2	BD	65	<)					L)					
L									2A	SF														<.								

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 QM2	TX TM	TX TX	F S	C C	% O	M O	ARG CHT	RI 2	1 ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/		245.54	248.87	3.33			BRHT	SF		SN1	SS	SC					NS6	P				>+						D)				
L								3A		*S1		(F		1	C		KN+								<.							
R		245.54	248.87		SANDSTONE FRAGMENT AT 247.09 M CONTAINS FLUTE CAST.																												
R		245.54	248.87		THE INTERVAL BETWEEN 245.67-246.89 M IS MODERATLY FRACTURED																												
R		245.54	248.87		AND CONTAINS QUARTZ - SIDERITE VEINS.																												
/		248.87	253.00	4.13			BRHT	SF	CR	*C1	F*	R*					LP5	P				>)						R+				
L								4A	GR	SN=		SS			+	C	LP3															
/		252.50	253.00	0.50		X	BRHT	CR	GR	GGS								R														
L																																
R		252.50	253.00		THIS INTERVAL IS HIGHLY BROKEN UP AND ON BOTH SIDES IT IS																												
R		252.50	253.00		MODERATLY BROKEN UP.																												
/		253.00	264.57	11.57			ARGL	CR		SN=	SS	LM						P		BD		50	V=					L)				
L								3A	GR	SI+																						
R		253.00	264.57		THE CORE BETWEEN 262.13-264.57 M IS BORKEN UP. THIS APPEARS																												
R		253.00	264.57		TO BE A RESULT OF SHEARING. PYRITE APPEARS TO BE CONCENTRATED																												
R		253.00	264.57		IN SAND LAYERS, POSSIBLE REPLACEMENT.																												
/		264.57	277.26	12.69			ARGL			SN+	SS							P	2	BD		70	<=			C.		L)				
L								3A	SF	SI+																						
R		264.57	277.26		THE CORE HAS BEEN BROKEN UP AND ARRANGED IN THE WRONG ORDER.																												
R		264.57	277.26		CONTACTS BETWEEN REPEATS INTERVALS ARE NOT CLEAR. PYRITE IS																												
R		264.57	277.26		LAMINATED AND APPEARS TO BE A REPLACEMENT OF THE SAND UNITS.																												
/		265.57	266.12	0.55		X	BRPM	SF		SN1	SS		0	2	1	P	LP5	R														
L								3A	CR	SI2			3		0		212											R)				
R		265.57	266.12		CONTACT NOT SEEN BUT APPEARS TO BE A DEPOSITIONAL FEATURE																												
R		265.57	266.12		RATHER THAN A FRAGMENT.																												
/		273.79	274.49	0.70		X	BRHT	SF		*C=	R*	R*					NP6	R										R)				
L								4A		SN1		SS					KM2															
/		277.26	281.33	4.07			BRPM	SF		SN4	SS	R*	1	5	3	P	LP4	P	1	BD		U70	<=			C.		D)				
L										SI1	DB	FU			0		KM1								<.							
R		277.26	281.33		THE AMOUNT OF SAND INCREASES TOWARDS THE TOP AND BEDDING IS																												
R		277.26	281.33		WELL DEFINED. AT THE BASE THE FRAGMENTS ARE COARSER AND BEDDING																												
R		277.26	281.33		IS UNDEFINED. CHERT CONTENT DECREASES TOWARDS THE TOP.																												
R		277.26	281.33		AGAIN CONTACTS ARE NOT WELL DEFINED.																												
/		281.33	287.12	5.79			ARGL		CR	SN+	SS	SC						P	1	BD		65				C.		D)				
L								3A	SF	SI+																						
/		281.33	287.12	5.79		X	ARGL	CR	GR	GG=	SS	SC						R	1	BD		65				C.		D)				
L								3A	SF	SI+																						
R		281.33	287.12		CORE IS BORKEN UP DUE TO SHEARS.																												
R		281.33	287.12		THE WHOLE INTERVAL IS SHEARED. SOME PARTS WORSE THAN OTHERS.																												
R		281.33	287.12		THERE IS ALSO A SMALL SANDSTONE UNIT AT 284.38 M.																												
/		287.12	295.66	8.54			BRPM	SF		SN5	SS	DB	1	4	4	P	KP3	P								C)		R)				
L								4A		SI1			5		0		KM=															

K E Y	F -L-	F R O M -	T O -	I N T	RECOV R Q D	MD % AGE	ROCK EV	TM RQ	TM LC	QM1 TM	TX QM2	TX TX	F S	C C	% M O	ARG O	CHT	RI 1 2	ID	AZM	DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
R		287.12	295.66																													
R		287.12	295.66																													
R		287.12	295.66																													
/	FLT	293.62	294.02	0.40			X	BRPM	CR	GR	GG8							R										D)				
L																																
/		295.66	307.23	11.57				ARSN	SF	CR	SN3	SS	SC	1	4	3	M	P	1	BD		70	<=			C+		D)				
L									3A		SI1			6																		
/		295.66	296.86	1.20			X	ARSN	SF	CR	SN3	SS	SC	1	4	3	M	R	1	BD		80	<=			C+		D)				
L									3A		SI1			6																		
R		295.66	307.23					THE BEDDING ANGLES CHANGE FROM TOP TO BOTTOM. IT IS 80' NEAR																										
R		295.66	307.23					TOP, THEN 70', 60' AND BACK TO 80' NEAR BASE. BARITE OCCURS																										
R		295.66	307.23					MAINLY ON FRACTURE SURFACES BUT ALSO OCCURS AS SMALL VEINS.																										
R		295.66	307.23					MOST OF THE INTERVAL IS SHEARED.																										
/		296.86	299.01	2.15			X	ARSN	SF	CR	SN3	SS	SC	1	4	3	M	R	1	BD		70	<=			C+		D)				
L																																
/		299.01	302.86	3.85			X	ARSN	SF	CR	SN3	SS	SC	1	4	3	M	R	1	BD		60	<=			C+		D)				
L																																
/		302.86	307.23	4.37			X	ARSN	SF	CR	SN3	SS	SC	1	4	3	M	R	1	BD		80	<=			C+		D)				
L																																
/		306.43	306.63	0.20			X	ARSN	CR	GR	GG8							R										D)		D)		
L																																
K	UM1	307.23	307.23	0.00																												
/	LSX	307.23	308.63	1.40				LMSX	PY	SF	SI=	LM	LC	0	1	+	J	P	1			80			C-	L2		L4	C.	L+		
L									5A		CH3															L)				L+		
R		307.23	308.63					CORE IS BROKEN UP CARBONATE CRYSTALS OCCURS ON FRACTURE SURFACES																										
R		307.23	308.63					PURPLE, BLUE STAINING DUE TO COPPER. SPHALERITE AND GALENA																										
R		307.23	308.63					OCCURS MAINLY WITH THE LAMINATED CHERT.																										
/	FSX	308.63	309.08	0.45				FGSX	SF	8A		BR				MO3		P				*)			*2		#3		**			
L									TA	PY																				*1		
R		308.63	309.08					THE ARGL. FRAGMENTS COMPOSE 30% OF THE INTERVAL AND ARE SILIFIED																										
R		308.63	309.08					THESE FRAGMENTS ALSO CONTAIN INTERSTITIAL BARITE. THE SULPHIDE																										
R		308.63	309.08					FRAGMENTS ARE LAMINATED. THE INTERVAL IS HIGHLY FRAGMENTED AND																										
R		308.63	309.08					BRECCIATED. DOTH THE SPHALERITE AND GALENA ARE FINED GRAINED.																										
/	LSX	309.08	309.53	0.45				LMSX	SF	PY	SI2	LM	LC	0	1	1	N	P	2	BD		60				L5		B2	C.	L)		
L									YW	8A		SC																		L=		
R		309.08	309.53					SPHALERITE IS FINE GRAIN AND VARIES IN COLOUR FROM A YELLOW TO																										
R		309.08	309.53					PINKY-RED. IN PLACES THE BEDDING IS DISLOCATED. NEAR THE END																										
R		309.08	309.53					OF THE INTERVAL, THE ROCK IS CRUSHED, THEREFORE THE LENGTH OF																										
R		309.08	309.53					THE INTERVAL IS ESTIMATED. BARITE IS WEATHERED THEREFORE LOW																										
R		309.08	309.53					S.G.																										

K E Y	F -L- G	FROM ----.--	TO ----.--	INT ---.--	RECOV ---.--	MD % ROCK AGE	TM EV	TM RG	QM1 LC	TX TM	TX QM2	F TX	C TX	% M S	ARG C	RI O	1 2	ID ID	AZM AZM	DIP DIP	QZ MG	FL MU	CY CL	CA SD	BA QS	XX HA	PY PR	CP MT	GL SL	YY HA	A 1	A 2
/	LSX	309.53	310.47	0.94					LMSX	SF	PY	SI1	LM	LC		P	1	BD		80				L4		L3		L+			
L										8A	BA		SS																	L1			
R		309.53	310.47		THE YY MINERAL IS WITHERITE WHICH IS YELLISH-RED IN COLOUR.																												
R		309.53	310.47		THERE IS APPROX. 5% LAMINATED, CHERT AND 10% SILIFIED SILT. THE																												
R		309.53	310.47		WITHERITE OCCURS IN BANDS AND REPRESENTS 1% OF THE UNIT. PYRITE																												
R		309.53	310.47		MARCASITE IS ASSOCIATED WITH FRACTURE FILLING.																												
/	LSX	310.47	310.85	0.38					LMSX	SF	PY		SS	SC		P	0	LM		70				L4		L2		L+	WI		
L										6A	BA		TA	LM															L=	L-		
R		310.47	310.85		THIS INTERVAL CONTAIN APPROX 30% ARSI AND HAS INTERSTITAL BARITE																												
R		310.47	310.85		RANGING UP TO 40% OF THE TOTAL COMPOSITION. THE SPHALERITE AND																												
R		310.47	310.85		GALENA IS FINE GRAINED AND IS THINLY LAMINATED. THERE IS ALSO A																												
R		310.47	310.85		MINOR SHEAR ZONE WITHIN THIS UNIT.																												
/	LSX	310.85	311.74	0.89					LMSX	BA	PY		LM	LC		P								L5		L4		L+			
L										6A																			L=			
R		310.85	311.74		THE LENGTH OF THIS INTERVAL IS ESTIMATED DUE TO LOST AND																												
R		310.85	311.74		GRINDING OF CORE. PERCENTAGES DIFFICULT TO ESTIMATE. THE																												
R		310.85	311.74		BARITE IS HIGHLY WEATHERED AND HAS A LOW S.G.I+ ALSO HAS A																												
R		310.85	311.74		SUGARY TEXTURE.																												
/	LSX	311.74	312.08	0.34					LMSX	SF	PY		LM	LC		P	2	BD		70				L3		L3		L)			
L										9A	BA		SS	SC															L+			
R		311.74	312.08		THERE IS APPROX. 35% ARSI WITHIN THIS UNIT AND CONTAINS 40%																												
R		311.74	312.08		BARITE. BARITE OCCURS AS MICROVEINS. MINOR BRECCIATION WITHIN																												
R		311.74	312.08		THE ARSI.																												
/	LSX	312.08	314.15	2.07					LMSX	SF	BA		LM	LC		P	2	BD		70				L4		L3		L+			
L										TW	PX		SS	SC															L1			
R		312.08	314.15		THERE IS APPROX. 10% ARSI, WHICH IS LAMINATED AND BEDDED.																												
R		312.08	314.15		GALENA IS FINE GRAINED AND OCCURS IN THIN LAMINATIONS.																												
R		312.08	314.15		SPHALERITE VARIES FROM A PINK TO AN ORANGE - RED.																												
/	LSX	314.15	315.53	1.38					LMSX	SF	PY		LM	LS		P	1	LM		80				L2		L4		L)			
L											BA		SS	SC															L+			
R		314.15	315.53		TIS UNIT CONTAINS 35% SILIFIED ARSI. THERE IS A SHEAR ZONE																												
R		314.15	315.53		WITHIN THE INTERVAL. THESE SHEARING SURFACES ARE GRAPHIC. NEAR																												
R		314.15	315.53		THE END OF THE INTERVAL, PYRITE INCREASES TO 60% OF THE ROCK.																												
R		314.15	315.53		THE ARSI IS LAMINATED.																												
/		315.53	320.77	5.24					ARSI	SF	PY	SI2	LM	CC	1 2 = M	P	1	LM		70				C=		L+		<.			
L										3A	BA	SN=	SS		7														<-			
R		315.53	320.77		THERE HAS BEEN MOVEMENT ALONG BEDDING PLANES. ALONG THESE																												
R		315.53	320.77		SHEARED SURFACES, BARITE AND MINOR GRAPHITE HAS FORMED.																												
R		315.53	320.77		SPHALERITE AND GALENA OCCURS WITH BARITE IN MICROVEINS. THE																												
R		315.53	320.77		LAST 3 METERS IN THIS INTERVAL IS HIGHLY FRAGMENTED.																												
/	LSX	320.77	321.81	1.04					LMSX	PY	BA		LM	LC		P	3	BD		80	<-			L1		L7		L+			
L														MX								L.							L1			
R		320.77	321.81		THIS UNIT IS COMPOSED OF MAINLY BEDDED PYRITE. THERE IS ALSO																												

K E Y	F -L- G	F R O M	- T O -	I N T	RECOV R Q D	MD % AGE	ROCK TM EV	TM OM1 RQ	TX TX LC	F C % M ARG TM OM2	RI 1 ID AZM DIP 2 ID AZM DIP	QZ FL CY CA BA XX PY CP GL YY MG MU CL SD QS HA PR MT SL HA	A 1 A 2
R		320.77	321.81				APPROX. 2% ARGI WHICH INCREASES TOWARDS THE BASE.						
K	LM1	321.81	321.81	0.00									
/		321.81	330.71	8.90			SILT SF PY SN1 LM SS 0 2 1 K			P 1 LM 80 <)		<) L) <.	
L							3A CR		SC 7			C. <(	
R		321.81	330.71				THE WHOLE INTERVAL IS HIGHLY SHEARED. BARITE OCCURS AS MICRO						
R		321.81	330.71				VEIN AND ON SHEAR SURFACES. SPHALERITE OCCURS WITH THE QUARTZ						
R		321.81	330.71				VEINS.						
/	FLT	327.54	327.86	0.32			X SILT GR GR GG9			R		D) D+	
L													
/		330.71	332.23	1.52			BRPM SF PY *C2 R* F* 1 4 3 P MP4			P		>) C- D+	
L								LA	SN3	2 0 KM2			
R		330.71	332.23				THIS UNIT IS MODERATELY FRAGMENTED DUE TO FAULTING AND SHEARING						
R		330.71	332.23				WITHIN THE ZONE. T.D. AT 332.23M.						

G E O L O G E D I T L I S T I N G

SYSTEMS ENGINEERING BY
INTERNATIONAL GEOSYSTEMS CORP.

PAN OCEAN OIL LTD.
JASON PB-ZN-AG-BA STF DEPOSIT, Y.T.

FORMAT VERSION : 6802

DRILLHOLE/TRAVERSE :	81-DH084	COLLAR ELEVATION:	1233.15	AZIMUTH(DEG) :	172.00
TOTAL DEPTH/LENGTH :	621.49	NORTHING(- IF S):	7002328.00	VERTICAL ANGLE :	-85.25
CORE/HOLE DIAMETER :		EASTING (- IF W):	436584.62	CO-ORD SYSTEM :	

GEOLOGGED BY : BHO +
DATE (YY/MM/DD): 810000
PROJECT NUMBER : JASON

SEQ. NO OF SURVEY DATA	LENGTH FROM COLLAR TO SURVEY POINT	AZIMUTH (DEG)	VERT. ANGLE (DEG)
1	12.00	171.30	-85.25
2	24.00	169.70	-85.25
3	37.00	167.60	-85.38
4	49.00	163.60	-85.38
5	61.00	158.60	-85.52
6	73.00	154.70	-85.42
7	85.00	151.90	-85.42
8	98.00	146.10	-85.50
9	110.00	138.90	-84.97
10	122.00	134.30	-82.83
11	134.00	132.50	-82.47
12	146.00	132.80	-81.75
13	159.00	131.00	-80.97
14	171.00	130.30	-80.05
15	183.00	130.40	-79.42
16	195.00	132.10	-78.83
17	207.00	131.30	-78.58
18	219.00	131.50	-78.38
19	232.00	121.40	-79.30
20	244.00	119.50	-79.03
21	256.00	117.70	-78.33
22	268.00	117.70	-77.42
23	280.00	113.90	-76.83
24	293.00	110.80	-75.17
25	305.00	109.80	-74.03
26	317.00	110.70	-71.75
27	329.00	111.50	-68.78
28	341.00	112.50	-68.38
29	354.00	111.50	-68.17
30	366.00	108.20	-67.03
31	378.00	107.20	-67.03
32	390.00	105.10	-67.17