

(5)

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ELL	KUYANAK	(#1			Date	2-12-81	Time	0600	
esent Depth									
mation(s)									•
sent Activity:									
HOLOGIC DESCR									
erval Reported	m		Sar	npling Inter ft.	val	ft. S	Sample Quality		
Interval	ı			Description				Avg. Dri mir	ll Rate i./ft.
-									
	1				· · · · · · · · · · · · · · · · · · ·				
									
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	<u> </u>			•				1	
								<u> </u>	<u>.</u> .
	<u> </u>		 						
SAS OCCURRENCE	I SHOME			•				.]	
INS OCCURRENCE	Total	Cuttings	Backgrou	ind Gas		CHROMATO	GRAPH (PPM	[)	
INTERVAL	Gas Units	Gas Units	Uni Before	its After	C ₁	C ₂	C3	C4	C ₅
				-				1	
				<u> </u>		:			
· ·				 	! !			 	 -
						.,			1
tch Gas (Units):									
ten das (ondis).	Background	-	Соплес	tíon		Trip	Peal	a	
		577.7	.1.	. 01	Ø 61		. 00		OF -
fud: Wt	V1S	W.L	pn	_ & 01	70 Ci	2Temp	,r	. и	. r. ou
ata Unit:									
Depth	<u> </u>	 -	Shale Density		- Da	Exponent		Pore Pressure	
			Made Deliaty			Linpotterit		10(011025211	<u> </u>
		<u></u>	·			<u> </u>			
			· <u>·····</u>						
spatched Samples:									
Турс			Inter	val		No. of Box	es	Set N	D
Washed & Dried Di	tch		-						
Unwashed Ditch (Unwashed Ditch (U				-		·			
verifinem toanned									



VELL	KUYAN	AK #1	·		Date 2/13/81 Time 0600				
					Footage 24 Hrs.				
ormation(s)				T	ор				
resent Activity:	Rigging	up. Repa	iring <u>leak</u>	ing pump	s. Antic	ipate spud	PM today.		
ITHOLOGIC DESC	RIPTION								
nterval Reported			Saz	mpling Inter	val	ft. !	Sample Quality_		
ag Time:	г	лiл. @		ft.					
_				.				Avg. Dr	ill Rate n./ft.
Interval	PROVIDE	r: 1		Description		ine Staple:	r.		
	REQUES	2	Info. fro	om Baroid	rep. or	duties of			
		····	employees	on well	-site.	·			
							ticipation		
<u>-</u>	of 60'	Zhr drlg.	<u>rate afte</u>	r spuddij	ng.		<u>-</u> .		. <u>-</u>
									·
	<u> </u>	<u>.</u>				 -			
·	-								
				·	_		··		
	 						<u> – . – . – . – . – . – . – . – . – . </u>	!	
GAS OCCURREN	CE/SHOWS	<u></u>	 					<u>. </u>	
<u>ono occounts</u> ,	Total	Cuttings	Backgro			CHROMATO	GRAPH (PPM)	,	
INTERVAL	Gas Units	Gas Units	Un Before	its After	c ₁	C ₂	C ₃	C ₄	C ₅
							<u> </u>	<u> </u>	
								<u> </u>	
		·		 	 			+	-
									1
				<u> </u>	l 	}	1	.l	1
Ditch Gas (Units):	Destacend		Connec	tion		Trin	Peaks		
2.0	раскатопли		COMME			111p	IUAKS		
Mud: Wt	Vis	w.L	ph	cc Oil	% C1	2Tem	oF.	in	_oF. out
Data Unit:									
Data Onic.									
Depth			hale Density		De	Exponent		Pore Pressur	<u> </u>
						<u></u> ,			
		<u> </u>		·**	, <u>.</u>				
Dispatched Sample	<u>s:</u>								
Ту	pe		Inter	rval		No. of Box	xes	Set N	lo
Washed & Dried			· · · ·			·· -			
Unwashed Ditch Unwashed Ditch	(USGS)						-		
GeoChem (canno	ed)	No			_ 				



VELL	KUYANAK #	1		_ Date	2-14-81	Time	0600				
resent Depth	317'	Previous Depth	100'		_ Footage 24 Hrs.	· 	217'				
formation(s)	Nanushuk		Т	op Sur	rfade						
resent Activity:	Drilling.										
ITHOLOGIC DESC											
nterval Reported	100-270	nin. @263	Sampling Interv	al 30_	ft. Samp	ple Quality _	Fair				
Lag Time:4	п	nin. @ <u>263</u>	ft. (250	stroke	s)						
Interval	ı		Description				Avg, Drii min	ll Rate			
100~194	Clyst	. lt gy, pt sltv	, tr dk qy	sh, pyr	incls, occ sd	grns,	0.2	?			
		thn slt & ss bds			•		<u> </u>				
194-211		t gy to gy, m -					1.5				
		grns. calc. sid									
211-270		t gy, f-grn, sl					0.6	55 .			
· · · · -		grns & flks, roa fri, fr por, no s				270.					
·						· · ·					
					ck with Baroid		<u> </u>				
	_				<u>epios @ well s</u> wellsite.		 				
							1				
					<u> </u>						
						···	<u> </u>				
			-				 	_			
							<u> </u>				
GAS OCCURREN	CE/SHOWS	(NONE)									
	Total Gas		ground Gas Units		CHROMATOGR						
INTERVAL	Units	Units Before	After	C ₁	C ₂	С3	C ₄	C ₅			
	\dashv				-		+	 			
							1]			
			<u> </u>				 	 			
		<u> </u>	<u> </u>		<u> </u>						
Ditch Gas (Units):					*			_			
Diten Gas (Ginta).	Background.	Con	mection	None	Trip <u>None</u>	Peak	s <u>N</u>	lone			
. •	ne	20 . 1	o s on N	tone a e	600 =	72 or	:- 73	0E au			
Mud: Wt9.	<u>.0 Vis39</u>	9 W.I. 20 ph_1	ਨ*ਤ" α ΩI [_]	One_ % C	2_0001emp	_ <i>_:,</i> ~, ~F.	UI	r. out			
Data Unit:											
1	 	Photo Dona	···		k Exponent		Pore Pressure				
Depth		Shale Densi	<u> </u>		.76	 	-				
200					.92		-				
300					.94	 					
						<u> </u>					
						J					
Dispatched Sample	es:										
<u></u>	/pc	I.	nterval		No. of Boxes		Set N	<u>c</u>			
Washed & Dried Unwashed Litch			·								
Unwashed teach											
GeoChen. v. nn	cd)										
Cores		No.									



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TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

<u> </u>	KUYAN	NAK #1			_ Date	2/15/81	Time	0600	
sent Depth	1390'	Prev	irs	1073'					
rmation(s)									
esent Activity:	Tripping f	for new bi	<u>t</u>						
THOLOGIC DESC	RIPTION								
terval Reported	270-1380)	San	pling Interva	al30_a	<u>ind 20</u> ft. Si	ample Quality_	<u>Fair</u>	
g Time: 32	п	úп. @ <u>139</u>	ο	_ft. {56	strokes	/min)			
								Avg. Drill	l Rate
Interval]	Description			t	min.	
270- <u>345</u>	Intbo	d clyst. l	t av, v si	t. sltv.	pt sdv.	pyr incls.	w/ss.	0.3	
	lt or	, pt salt	s pepper	f - v f	grn. w/	<u>m - arn str</u>	s. SA		
	to a	ng, calc,	pt_sid_p	r incls.	<u>fos f</u> ra	gs, carb gr str @ base.	ns, str <u>s</u>		
	W/II	por, no s							
345-375	Clys	t, lt gy t	coal	0.4					
		@ base							
275 204		lt tannish	eia	1.2					
<u>375-384</u>	hd.	tt, no sho							
		<u>.</u>				_			
384-1180	Intb	<u>civst. It</u> sl salt s	pepper m	<u>sity. 5d</u> - v f ar	n, SA, t	<u>, ss is lt 6</u> n <u>- srtd. c</u> a	lc. pt	<u> </u>	
	sic,	carb, che	rt & arg	rns, occ	w/sl po	or, no show,	scat		
<u>. </u>									
1180-1390	- Se	v = 1t mv	f - v f (arn. SA.	m - srto	d. pt slty.	calc.	1.3	
1100-1390	sl s	il. carb s	rns & flk	s. sid pt	gs & no	ods, pyr in	el. scat		
	fos	frags, thr	sltst st	rgs becom	ning gy	& dk gy and	tr dk	- 	
<u> </u>	gy s	h. clyst s	strgs					 -	
	 				NEED:	Geochem la	abels	<u> </u>	
GAS OCCURRENCE	CE/SHOWS								
	Total Gas	Cuttings Gas	Backgrou Uni				GRAPH (PPM)	T	
INTERVAL	Units_	Units	Before	After	c ₁	C ₂	Сз	C4	C ₅
740-780	5	1	<u> </u>	1		TOM)	WORKING)	<u> </u>	
975-1000 1090-1110	11 45	1	5 5	5 15	-			 	
<u> </u>	143				(Backo	round gas s	lowly incre	asing fro	a
					15Un	its @ 1115	to 35 units	<u>. a 1300.)</u>	 -
				[<u>. </u>	 	
	<u> </u>	<u>'</u>	-			A			
litch Gas (Units):		25	-		1310	Trip None	Danks	Ac Abos	70
-	Background		Соллес	tion <u>50 e</u>		-			
, O	5 se. 34	W 1 24	ph8.5	ss Oil No	one 44.Cl	1600 @ 600 1250 @ 900 2Tems	, 60 OF	in 62	or out
Mud: Wt. 3	· 7 VIS	₩.L	pu	_ ~ ~ ~		1000 @ 1390			
Data Unit:									
			C. EXPONENT			DEPTH		EXPONEI	
Depth		X	Mx1exDeexXXX		<u> </u>	Distriction and the Control of the 		Poze Russus	
350			0.93 1.00			900		1-09	
<u>400</u> 450			.99			950		1.10	
500			0			1000		<u>) ne</u>	
550		 	1.04			1050 1100	+	1.03	
600	650	<u> </u>	1.05			1150		1.03	
Dispatched Sample	s: 700		1.09			1200 1250		1.10 1.16	
	750 800	· · · · · · · · · · · · · · · · · · ·	1.06 Inter	val		1300 -		<u> 1.16</u> —	
Ty Washed & Dried	<u> </u>			- <u>-</u> -					
Unwashed Dich	(Paleo)								
Unwashed Ditch									····
GeoChem (ca		No.							
		1							_

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TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL KIYAN	Date Tune			0600	0600							
Present Depth15	29'	Ртс	vious Depth _	139	101		Footage 24 Hr	ī	139'			
Formation(s) Na:	nushuk				Тор	Surf	ace					
Present Activity:	rok		<u>. </u>			142	14'					
LITHOLOGIC DESCR	IPTION											
Interval Reported Lag Time:33		9 un. @]	San	npling Inte ft. (59	rval	20	ft. San	nple Quali	ty <u>Fair</u>	<u>.</u>		
Interval	ı		1	Description	1				Avg. Dril			
1380-1384	Clyst.	lt gy. t	r v - dk c						2.0			
1384-1391					grn, S	Α, ο	alc, sil,		0.3	0.3		
	carh,_	pyr incl,	tt. no sh	10W								
1391-1417	Clyst,	lt qy, s	ft, slty,	w/ v dk	gy sh	stra	, intbd ss	as abo	ve 2.0			
1417-1432			y, f - v f				ayey in pt	, sl	1.1			
1432-1529	lt to	m qv, çal	lc, carb, p				gy sh, and as & Crin,					
	in dk	cols @ 19	500'.			· -			-			
	Ran Lo	qs: DI/Bh	ICS/LSS/FDC	C/CNL; 6	0600 w	ere	rerunning l	DI		-		
		<u> </u>										
							· · · · · · · · · · · · · · · · · · ·		 			
GAS OCCURRENCE		NONE)	ъ									
	Total Gas	Cuttings Gas	Backgrous Unit	S		1	HROMATOGR					
INTERVAL	Units	Units	Before	After	C ₁	+-	C ₂	C ₃	C ₄	C ₅		
						<u> </u>				_		
·					ļ <u>-</u>	-						
	-				 	+				· · · · · -		
						 				· · · ·		
	sackground_						65 @ 139					
Mud: Wt	_ V15 <u> </u>	_ W.L. <u></u> -	pn	. ac Oul	%C	12-	Temp	<u>51 </u>	f. in <u>68</u> 0	F. out		
Depth	I	Si	nale Density	I		λ Ex	ponent		Pore Pressure			
1400						1						
1450 1500						1.						
Phones and Co. of the												
Dispatched Samples:												
Type			interva				No. of Boxes		Set No.			
Washed & Dried Ditch 100-1529							(bex =1)	1754	A & E			
Unwashed Ditch (Paleo) 100-1529 Unwashed Ditch (USGS) 100-1280							(boxes =1 6 (box ±1)	* 47	_ -			
GeoChem (canned)			100-1240			<u> </u>	(box 51)	3,4)				
Cores		l Nin										

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WELL	KUYANAK #	1			Date_	2-17-81	_ Time	0600	
Present Depth	1529'	Pr	evious Depth _	1529	1	Footage 24 Hr	3,		
						14241			
Present Activity:	Circulati	ng prior	to cementi:	ng.					
LITHOLOGIC DES	CRIPTION								
Interval Reported Lag Time:		min. @	Sa	mpling Inter ft.	va!	ft. San	ople Quality_	··	
Interval				Description .		<u> </u>		Avg. Dr mir	ill Rate n./ft,
	Finis Set c	hed loggi asing, 13	ng; DIL re -3/8 to 15	run and	dipmete	r @ 1100 hrs.			
	<u> </u>					REQUEST: Tabl	at of		
						morning repo			
						·			
						-			
								<u> </u>	
				<u>-</u>					
								<u> </u>	
								-	
									
GAS OCCURREN	ICE/SHOWS								
das occorrer	Total	Cuttings	Backgrou			CHROMATOGR	АРН (РРМ)		
INTERVAL	Gas Units	Gas Units	Uni Before	its After	c_1	C ₂	C ₃	C ₄	C ₅
									Ţ
				-					
	1		ļ	<u> </u>					
	1 1		1	!!!		!	<u></u>	l	<u> </u>
Ditch Gas (Units):	Background		Connec	tion		Trip	Peaks		· · ·
Mud: Wt	Vis	W.L	ph	_ cc Oil	% C1	2Temp	o _{F.}	in	^O F. out
Data Unit:									
Depth			Shale Density		D	Exponent	1	Pore Pressure	
-									
							<u> </u>		
Dispatched Sample					·				
							 	#* k v	
Ty Washed & Dried	<u> </u>		Inter	ral	+	No. of Boxes		Set No	1,
Unwashed Ditch	(Paleo)								
Unwashed Ditch GeoChem (canno					:				
Cores		No.			· · · · · ·				



	KUYANAK	<u>#1</u>				Date	2-18-81	11me	0800	
esent Depth_	15291		Previ	ous Depth	15291		_ Footage 24 l	Irs		
ormation(s)	Torok			<u></u>	Тор					
resent Activity	Nip	pling	up BOP &	WOC			 -		· · · · · · · · · · · · · · · · · · ·	
THOLOGIC I	ESCRIPTIO	N								
iterval Reporte	d	min	ı. @	Sam	pling Interval _ft.		ft. Sa	mple Quality		
										ili Rate
Interval	1			I	Description		· 			n./ft.
	+ 6	emente	d 13-3/3	casing 0	1521'					
							7 4 7		+	
	N			hole.			dne to larg	<u>e</u>	1	
										
									1	
				<u> </u>						
							<u>.</u>		 	
										
									<u> </u>	
GAS OCCUR		WS otal	Cuttings	Backgrou	and Gas		CHROMATO	GRAPH (PPN	4 0	
INTER	Č	Gas Inits	Gas Units	Uni Befor e	its	C ₁	C ₂	C ₃	C ₄	C ₅
INTER	VAL									
	-									
							 			
Ditch Gas (Ur	nits):	aound		Connec	tion		Trip	Pea	ıks	
	Back	_		-			Trip			
	Back	_		-			TripTem			°F. out
331.	Back	_		-						°F. out
Mud: Wt.	Back	_	_ W.L	-		%C				
Mud: Wt.	Back	_	_ W.L	- ph		%C	1 ₂ Tem		F. in	
Mud: Wt.	Back	_	_ W.L	- ph		%C	1 ₂ Tem		F. in	
Mud: Wt.	Back	_	_ W.L	- ph		%C	1 ₂ Tem		F. in	
Mud: Wt.	Back	_	_ W.L	- ph		%C	1 ₂ Tem		F. in	
Mud: Wt.	Backy Vi Depth	_	_ W.L	- ph		%C	1 ₂ Tem		F. in	
Mud: Wt. Data Unit:	Backy Vi Depth	_	_ W.L	- ph	cc Oil	%C	1 ₂ Tem	o,o	Pore Pressu	
Mud: Wt. Data Unit: Dispatched S Washed &	Backy Vi Depth Samples: Type Dried Ditch		_ W.L	phph	cc Oil	%C	12Tem	o,o	Pore Pressu	are
Mud: Wt. Data Unit: Dispatched S Washed & Unwashed	Backy Vi Depth Samples: Type Dried Ditch Ditch (USGS		_ W.L	phph	cc Oil	%C	12Tem	o,o	Pore Pressu	are



DAILY GEOLOGICAL REPORT

<u>ELL</u>	KUYANAK	1 1			_ Date	2/19/81	Time	0600	
sent Depth	1529					_ Footage 24 I		<u>-</u>	
mation(s)	Torok			To	p <u> </u>	250'			
sent Activity:							•		
-			·						
HOLOGIC DESC			_		_				
erval Reported Time:		min. @	Sam	pling Interva _ft.	1	ft, \$2	imple Quality	·	
						1. The second of			
Interval	1		D	escription		100		Avg. Dri	ill Rate 1./ft.
		 -	<u> </u>	osciipiio.i				774.	
	NOTE:		te drilling	out fro	m under	casing late	e this	1	
	1	P.M.							
			*						
		-						ļ	
	<u> </u>							-	•
									-
								 	
				 -		 		 	
								1	
	 			-			 	-	
····								+	
									
	-	· · · · · -							
AS OCCURRENC	TE/SHOWS							<u> </u>	
AS OCCURRENC	Total	, Cuttings	Backgroup	nd Gas		CHROMATOC	GRAPH (PPM	<u> </u>	
•	Total Gas		Units	•	c ₁	CHROMATOC	GRAPH (PPM C3	C ₄	C ₅
AS OCCURRENC	Total	Cuttings Gas			C ₁	1			C ₅
•	Total Gas	Cuttings Gas	Units	•	C ₁	1			C ₅
•	Total Gas	Cuttings Gas	Units	•	c ₁	1			C ₅
•	Total Gas	Cuttings Gas	Units	•	c ₁	1			C ₅
•	Total Gas	Cuttings Gas	Units	•	C ₁	1			C ₅
INTERVAL	Total Gas	Cuttings Gas	Units	•	C ₁	1			C ₅
INTERVAL	Total Gas Units	Cuttings Gas Units	Units Before	After		1	C ₃	C4	
INTERVAL	Total Gas Units	Cuttings Gas Units	Units Before	After		. C ₂	C ₃	C4	
INTERVAL	Total Gas Units Background	Cuttings Gas Units	Before Connection	After After		. C ₂	C3	C ₄	
interval tch Gas (Units):	Total Gas Units Background	Cuttings Gas Units	Before Connection	After After		Trip	C3	C ₄	
ich Gas (Units):	Total Gas Units Background	Cuttings Gas Units	Before Connection	After After		Trip	C3	C ₄	
ich Gas (Units):	Total Gas Units Background	Cuttings Gas Units	Before Connection	After After	% C1	Trip	C3	C ₄	OF. out
ich Gas (Units):	Total Gas Units Background	Cuttings Gas Units	Dnits Before Connection Ph	After After	% C1	Trip Temp	C3	C ₄	.ºF. out
interval tch Gas (Units): fud: Wt	Total Gas Units Background	Cuttings Gas Units	Dnits Before Connection Ph	After After	% C1	Trip Temp	C3	C ₄	OF. out
interval tch Gas (Units): fud: Wt	Total Gas Units Background	Cuttings Gas Units	Dnits Before Connection Ph	After After	% C1	Trip Temp	C3	C ₄	OF. out
ich Gas (Units): iud: Wt	Total Gas Units Background	Cuttings Gas Units	Dnits Before Connection Ph	After After	% C1	Trip Temp	C3	C ₄	OF. out
ich Gas (Units): fud: Wt lata Unit: Depth	Total Gas Units Background	Cuttings Gas Units	Dnits Before Connection Ph	After After	% C1	Trip Temp	C3	C ₄	OF. out
ich Gas (Units): Mud: Wt Data Unit:	Total Gas Units Background	Cuttings Gas Units	Dnits Before Connection Ph	After After	% C1	Trip Temp	C3	C ₄	OF. out
itch Gas (Units): Mud: Wt. Data Unit: Depth ispatched Samples	Total Gas Units Background Vis	Cuttings Gas Units W.I.	Dnits Before Connection Ph	After On	% C1	Trip Temp	C3 Peal	C ₄	°F. out
ich Gas (Units): fud: Wt Depth spatched Samples	Total Gas Units Background Vis	Cuttings Gas Units	Connection ph	After On	% C1	TripTemp	C3 Peal	C4	°F. out

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DAILY GEOLOGICAL REPORT

WELL	KUYANAK #	1			_ Date_	2/20/81	Time	0600	
Present Depth	1529'	Prev	rious Depth _			_ Footage 24 I	Irs		
Formation(s)	Torok			т	ор				
Present Activity:	Pressure	testing Tr	i-flo Chok		· -			· -	
LITHOLOGIC DES	CRIPTION								
Interval Reported _ Lag Time:			Sar	mpling Inter	va!	ft. Sa	mple Quality		_
Lag Time:	· · · · · · · · · · · · · · · · · · ·	min. @		11,			_		
Interval			_ -	Description		· :		Avg. Dr	ill Rate n./ft.
	NOTE:	Estimate	drilling	out from	n under s	surface casi	ng	<u> </u>	
		this AM.			_	<u>-</u>			· -
						· .		ļ	
				· · · · · ·					
					·				
-			·						
-			· • • • • • • • • • • • • • • • • • • •						
			<u>-</u>			· · · · · · · · · · · · · · · · · · ·			
					···				
								 	
GAS OCCURREN									
	Total Gas	Cuttings Gas	Backgrou Uni	its	c.	CHROMATOC C ₂	C ₃	C ₄	1 C ₅
INTERVAL	Units	Units	Before	After	Cl	. 02		 	
•									
								ļ. <u>.</u>	
								<u> </u>	
		ļ							
Ditch Gas (Units).									
	Background		Connect	tion		Trip	Peak	s	
Mud: Wt	, Vis	W.L	ph	_ cc Oil	% C1	Temp.	of.	in	.°F. out
Data Unit:						_			
Depth	<u>.</u>) s	hale Density	·····	Do	Exponent	1	Pore Pressure	:
			·· · · · ·			·			
Dispatched Sampl	es:								
	/pe		Inter	val		No. of Boxe		Set N	o
Washed & Dried Unwashed Ditch									
Unwashed Drich GeoChem (cann	(USGS)	1							
Cores		No.	-·· 				-		

K - kn



ELL KUY	YANAK #1			_ Date_	2-21-81	_ Time	0600	
		Previous Depth						
ormation(s)	Torok	·	T-	ор	.250*			
resent Activity: _	Tripping,	adding stabilize	rs & reamer	s.	<u>:</u>		·	
ITHOLOGIC DE	SCRIPTION							
iterval Reported ag Time:1	1529-16 51	70' min. @ <u>1670</u>	Sampling Interv ft. (57	(a) 20 8 (SPM)	: 30 ft. San	nple Quality	Good	
Interval			Description				Avg. Dril min.	
1529-1640	Sltst	, gy, carb, cly,			ags, occ ss 1	атs,	0.7	1111
	w/int	bd sh, gy to lt g	y, sft, fis	s, slty,	sl carb			
1640-1670	Sh, d	k gy to gy, micro	micac, fis,	carb, p	ot slty		1.1	
	NOTE:	Advise incoming	wellsite o	eologis	to bring "O	0"		
		Rapidograph pen	S				 	
					· · · · · · · · · · · · · · · · · · ·		<u>.</u>	
	- -							
							<u> </u>	
			-					
							1	
	· · · · · · ·							
GAS OCCURRE	NCE/SHOWS	(NONE)						
	Total Gas		ground Gas Units		CHROMATOGE	ДАРН (РРМ	1	
INTERVAL			After	C ₁	C ₂	C ₃	C ₄	C ₅
				· - ··				-
								
				-				
					<u> </u>			·
Ditch Gas (Units)	: Background	5Con	nection No:	ne	TripNone	Peaks	None	
4.4	-							
Mud: Wt	2.4 Vis 38	W.L22 ph9	9.0 cc Oil	NC % C1	2 1200 Temp	62_of.	in <u>55</u>	F. out
Data Unit:								
Dept	h	Shale Densit	у	D _t	Exponent		Pore Pressure	
160	-	2.31		· ·-	1.20	 		
16'		2.31			1,10			
					_	i		
Dispatched Samp	oles:							
	уре	ŀr	iterval		No. of Boxes	j	Set No	
Washed & Drieg Unwashed Drieg								
Unwashed Date	n (USGS							
(A. 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	nes i							



Unwashed Ditch (Paleo)
Unwashed Ditch (USGS)

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL KUYA	NAK #1				Date_	2/22/81	Time	0600		
Present Depth27	80'	Pre	vious Depth _	1679'		Footage 24	Hrs	1101'		
Formation(s)				т	op					
Present Activity:				. <u></u>	·					
LITHOLOGIC DESCI	RIPTION									
Interval Reported Lag Time: 25		30	Sa 2600	mpling Inter	/al	ft. S	ample Quality	<i>'</i>		
			-			: SEE NOTE)		Avg. Dr		
Interval		->>-		 				min./ft. 0.8		
1670-2680			4' ss @ 2			ntbd sltst & nits gas.	occ ss	0.8	3	
		•				:				
	<u> </u>					<u> </u>				
				REQUES		ently need G				
				els, qt. car chem boxes.		1				
	ļ <u>-</u>			rt Schlumber	ger and					
	1.		t may be tomorrow							
	-		•• •		nig	ht or Tues.	morning.			
								<u> </u>		
	 				. <u> </u>					
	NOTE:					site inoper				
			o <u>te calls</u> heavy traf			minimize co	versation	1.		
	1	A more	detailed r	eport wil	ll be se	nt from well		:-		
	1	time 2-	23-81 and	should be	e attach	ed to this o	one.			
GAS OCCURRENC		_						_		
INTERVAL	Total Gas Units	Cuttings Gas Units	Backgro Un Before	its	C ₁	CHROMATO	GRAPH (PPN C3	C ₄	C ₅	
2205	240	None	10	20	_				-	
	 			-					 	
								•		
·			<u> </u>	 					+	
]				
Ditch Gas (Units):	Background	20-25	Connec	tion35		Trip None	Peal	ks <u>None</u>		
	Vis34	<u> w,r, 1</u>	.8 ph 8.5	<u>5</u> cc Oil	% C1	2 800 Temp	. <u>71</u> op	. in <u>67</u>	.°F. out	
Data Unit:										
Depth			Shale Density	Ţ	D	c Exponent		Pore Pressur	<u> </u>	
(WILL BE SE	NT BY MA	IL)					-	·		
				 -						
Dispatched Samples:										
Турс			inte	rvaJ		No. of Boxe	es	Set N	0.	
Washed & Dned D	itch									

1530-2660 1380-2481

12 . 6 . 1



WELL	KUYANAK #1			•	Date	2/22/81	Tim	c0600_	
Present Depth	2780*	P.	revious Depth	1679'		Footage 24	Hrs	11011	
Formation(s)	Torok		_	-	Гор	1250'			
Present Activity:								-	
rresent Acuvity.	<u>DII, III</u>	<u> </u>	··				-		
LITHOLOGIC DE	SCRIPTION								
Interval Reported Lag Time:	1670-268 25	nin. @	2600	Sampling Inter ft. 60	val <u>30 &</u> SPM	20 t ft.	Sample Qu	ality <u>Goo</u>	đ
NOTE: T	his should	be attacl	hed to Dai	ily Geo. R	eport o	f the same d	ate, 2/	22/81 Ave	, Drill Rate
Interval a	s a follow:	p. This	into. rec	Description	ct from	f the same d wellsite 2/	23/81.	1	min./ft.
1670~178						lty/intbd sl		0	.8
						<u>lt gv, sl se</u> cly, carb fl			
	gr, NS								
1783-214	7 Inthd	eb dk m	u mi	-mica fi	c eft	slty, carb	,		.8
1703-214				cly, sl		Sity, Card	prd &		
23.43.250	0 8)	. 1 1		-64					
2147-259						yrincl, rr F y, carb, occ		<u></u>	.9
	strt	r glau,	& rr ss. 1	v.lt gy -	gy, f,	v f gr. SA.	mod		
	sort,	pt sil.	slt <u>y, tr ç</u>	71au, 240	u_gas_i:	n sd @ 2204-	2207		-
2590-268						yr incl. occ			9
			y, carb, s	shy t ss.	lt gy,	g y, v f gr S	A, carb	 ·	
	S1 S1	TT NS							
			 -		-				
GAS OCCURRE									
0110 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total	Cuttings		round Gas		CHROMATO	GRAPH (PPM)	
INTERVA	Gas L Units	Gas Units	Before	Units After	c ₁	C ₂	C ₃	C4	C ₅
2205	240		10	20	=	_	<u> </u>		
			 		 	 	-		
			<u> </u>						
	<u> </u>								
			-	<u> </u>	<u> </u>				
		· ·							
Ditch Gas (Units)	i: Background	20-25	Conf	nection35	<u>.</u>	Trip		Peaks	
	_			-		-			
Mud: Wt	9.5 Vis 3	<u>4 w.l. 1</u>	8 ph 8	<u>-5</u> cc Oil	%(1 ₂ 800 Tem	p. 71	_oF, in _67	OF. out
Data Unit:									
Date Cint.									
DEPTH DC	х	DEPTH	DC X	DENSITY		DEPTH DC	х	DENSITY	
1700		2000	1.17			2300 1. 2350 1.	T	2.30 2.33	
	18 18	2050	1.16			2350 1. 2400 1.		2.24	
1850 1.	20	2150	1.18			2450 1.		2.40	
1900 1. 1950 1.		2250	1.18	••		2500 1. 2550 1.		2.40 2.45	
						2600 1.	27	2.50	
Dispatched Sami	ples:					1 1	27 30	2,47	ŧ
	Уре		In	terval		No. of Bo	~	Sé	1 No.
Washed & Drie Unwashed Drie			1630	2660		1			# 2
Unwashed Dita				-2660 -2480		1			‡2 _
GeoChem (car	ined)			-2420		3		Ecx	es 5.6.7
Cores		l No	- 					<u> </u>	

YAYRA TREM. INC.

Type

Washed & Dried Ditch
Inwashed Drich (Paico)
Death and Paich (1868)
South and Families

DAILY GEOLOGICAL REPORT

ELL	KUYANAK #1	<u> </u>			_ Date	2/23/81	Time	0600	
esent Depth	3310'	Prev	ious Depth	2780'		_ Footage 24 Hrs	J	530'	
-						.250'			
					F				
sent Activity:	DITTILL								
THOLOGIC DES									
terval Reported	2680-326	0	Samp	ling Interva	12	. ft. Sam	ple Quality	Good	
g Time:30	f	nin. @ <u>310</u>	1	IL. (60	SPM/				
								Avg. Dri	Il Rate
Interval			De	scription				min	ı./ft.
2680- <u>2792</u>	Sh, di	coy & qy,	fis, pt sl	ty, cart	o, occ_F	oyr incl, occ		0.9	_
	intbd	sltst, lt	gy & gy, c. sl slty, tt	aro, sny . no shr	/; SS, .	lt gy & gy, v	<u> </u>	 	
	- 9111,	JA, CULD,	31 010,7 10	, 01/2				<u> </u>	
2792-2972						bd sltst, dk		1.0	
	S gry .	sh in pt.	sl carb, o	cc thm s	ss stro	s, lt gy, v f	to	 	
	t-grn	_S8SLTY	. clayey, s	I carc,	carb, '	t, no show			
2972-3087	Sh. d	gy, slb	rn, fis, sf	t, sl s	lty, sl	carb; sltst,	dk gy	1.4	
	A_gv 1	orn, tr Fe	<u>-st. w/sd g</u>	rns, orr	ng-red.	and occ sil s	;S	+	·
3087-3093	Ss. v	lt gy, sl	_salt & pep	per, f	grn, SA	, clayey, s <u>il</u>	, arg	0.6	
		<u>cht grns,</u> our or cut		re grau	, V S1	por, 750 units	yas,	1	
3093-3260	Sh. b	rn-gy to d	ik gy, fis.	sft.sl	carb.	sl mic w/intbo	<u> </u>	1.2	
	sltst	. gy & dk	gy, pt shly	, and the	<u>nn ss a</u>	s above	***		
									_
		········	_ .					-	
GAS OCCURRE	NCE/SHOWS						-		
	Total	Cuttings	Background			CHROMATOGR	АРН (РРМ)	
INTERVAL	Gas Units	Gas Units	Units Before j		c_1	c ₂	C ₃	C ₄	C ₅
3081	750	None			75000	8000	4000	2500	500
					-			-	-
			• • •					+	+
									1 _
								+	
			<u> </u>	<u>:</u>		i — — —			<u> </u>
itch Gas (Units):								•	e
	•	-0 25		20-0	0	275 @ 297	Δ	as abo	**
	Background	30-35	Connectio	on <u>20-9</u>	00	Trip 275 @ 297	Y4 Peak	s as abc	
	Background								
Muđ: Wr. 9	Background					Trip <u>275 @ 297</u>			
	Background								
	Background	5_ W.L <u>11</u>	ph <u>9.0</u> _		% C1	2 650 Temp		, in <u>85</u>	°F. out
Data Unit:	Background 5 Vis 3	5_ W.L <u>11</u>	ph 9.0 _		% C1	2 650 Temp		in 85	°F. out
Data Unit: Depth	Background	5_ W.L <u>11</u>	ph 9.0 _		% C1	2 650 Temp		, in <u>85</u>	°F. out
Data Unit:	Background	5_ W.L <u>11</u>	ph 9.0		% C1	2 650 Temp c Exponent 1.30 1.30 1.29		Pore Pressure	oF. out
Data Unit: Depth 27.50 28.00 28.50 29.00	Background 5 Vis 3	5_ W.L <u>11</u>	ph 9.0		% C1	2 650 Temp c Exponent 1.30 1.30 1.29 1.33		Pore Pressure	°F. out
Data Unit: Depth 27.50 28.00 28.50 29.00 29.50	Background 5 Vis 3	5_ W.L <u>11</u>	ph _9.0		% C1	2 650 Temp c Exponent 1.30 1.30 1.29		Pore Pressure	oF. out
Data Unit: Depth 27.50 28.00 28.50 29.00	Background 5 Vis 3	5_ W.L <u>11</u>	ph 9.0		% C1	2 650 Temp c Exponent 1.30 1.30 1.29 1.33 1.34 1.21 1.39		Pore Pressure	°F. ou
Data Unit: Depth 2750 2800 2850 2900 2950 3000 3050 3100	Background 5 Vis 3	5_ W.L <u>11</u>	ph _9.0		% C1	2 650 Temp c Exponent 1.30 1.30 1.29 1.33 1.34 1.21 1.39 1.29		Pore Pressure	°F. out
Data Unit: Depth 2750 2800 2850 2900 2950 3000 3050 3150	Background 5 Vis 3	5_ W.L <u>11</u>	ph _9.0		% C1	2 650 Temp c Exponent 1.30 1.30 1.29 1.33 1.34 1.21 1.39		Pore Pressure	°F. out
Data Unit:	Background 5 Vis 3	5_ W.L <u>11</u>	ph _9.0	cc Oil	% C1	2 650 Temp c Exponent 1.30 1.30 1.29 1.33 1.34 1.21 1.39 1.29 1.35		Pore Pressure	°F. out

Interval

No. of Boxes

K - 56

Set No.



WELL	KUYAN	IAK #1			Date_2	2/24/81	Time	0600	
Present Depth378	39'	Prev	ious Denth	33101		Footage 24 !	Hrs.	479'	
	rok					250'		•	
7 01111a Boll(3)	·-·			·	тор				
Present Activity: Tr	ipping ic	new Dit	<u> </u>						
LITHOLOGIC DESCR									
Interval Reported Lag Time: 32	3260-37	80	Sa	mpling Inter	val 20	& 10 ft. S	ample Quality	Fair	
Lag Time: 32	п	<u>ամո. @370</u>	0	ft. (65 s	SPM)				
								Avg. Dril	II Pate
Interval	1			Description				, min	
3260-3345	Sh as	last rep	orted					1.1	
					11		-1	1.0	
3345-3543						ltst, brn-gy cn. SA, sltv		1.8	
		lc, tt, n		y, gy, v		117 041 3101			
				3					
3543-3619						ntbd sh, dk rn, v f grn,		1.9	
	no sì		,, 30ac p	,, <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	337 37 24	,	<u> </u>		
3619-3623						<u>, clyev, arg</u> flour, v fnt		1.5	
		nt. 270. u	_	_		ridni, v inc	_1.1		
								<u> </u>	
3623-3688	Intbo	sh, slts	t & ss as	abv				2.4	
3688-3694						ey, slty, co		1.6	
	qrns	<u>, carb flk</u>	s, arg &	dol (?)	grns, ra	re pk (pos q ut, 300 unit	tz)		<u>_</u> _
	drns	e cutoric	e grns, t	E, NO LI	our or c	uc, 300 unic	s yes	 	
3694-3780	Intb	đ sh, qy-b	rn, dk qy	, fis, p	t slty,	w/sltst, gy-	brn, shy;	3.2	
CACOCCUPRENCE						clyey, sil,	mica, rr	<u> </u>	
GAS OCCURRENCE	Total	grau, s Cuttings	l calc, t Rackgro	ound Gas	ow	CHROMATO	GRAPH (PPM)	
***************************************	Gas	Gas	Ū	aits		C ₂	C ₃	C ₄	C ₅
INTERVAL 3482	Units 290	Units 280	Before 20	After 25	5000	2000	1500	600	100
3615	270	290	20	30	80000	800	500	250	100
3680	300	260	20	15	95000	2500	1000	1000	500
	 				 	 			 -
		1		ļ	<u>.</u>	<u> </u>		<u></u>	1
Ditch Gas (Units):									
Ditch Gas (Omes):	Background.	20-25	Connec	ction	-	Trip	Peak	s as al	<u>v</u>
Mud: WI. 9.7	_ Vis35	W.I <u>18</u>	ph_ <u>8.0</u>	cc Oil	% C1	2 18,000 Temp	- of.	in	°F. out
Data Unit:									
<u></u>									
Depth		S	hale Density		D	c Exponent		Pore Pressure	
3300			2.56			1.34			
3350			2,56 2,57			1.41			
3400 3450			2.55			1.37			
3500			2.52			1.30		-	
3550			2.53 2.54	•	<u> </u>	1.33 1.40			
3600 Dispatched Samples:	3650		2.54			1.65			
	3700 3750		2.57			1.74	1	0.31	
Type Washed & Dried Di			Inte	rval		No. of Boxe	:2	Set No	١.
Unwashed Ditch (P		_	·		-	··			
Unwashed Ditch (L	ISGS)								
GeoChem (canned))	No					 -		
I CARDO		1 173							



DAILY GEOLOGICAL REPORT

YELL KUYAL		··			_	2/25/81			
resent Depth 4205	•	Ртсч	rious Depth				Hrs	416'	
formation(s)TO	ROK			т	ор	1250'			
resent Activity:	Orilling								
ITHOLOGIC DESCR		_	_	P 7 4	1	10 6.6	·	. Fair	
nterval Reportedag Time:45	<u>3780-419</u> 0	nin. @	Sал 4100	npling Interv _ft. (56	nal SPM)	1t. S	ampie Quar	1ty	
				_ (•					
Interval :				Danadasiaa				Avg. Dri	il Rate
	Ch.	m-bra di		Description of sltv.	. carb	micromicac,	e1	2.6	
3780-4080						sl mica, &			
					lyey, s	lty, carb gr	ns &		
	flks	, occ sl s	sil, no sh	ow .					·-
4080-4190	Intb	d sh. qv-l	orn, dk gy	, fis. p	t slty	, v sl carb,	w/sltst,	2.7	
	gy-b	rn, gy, sl	ny, sdy st	rs, & S5	, brn-	y to v lt gy	, v f	(4.0-1.4	1)
	grn.	SA. v sli	tv. clyev.	sl calc	, pt de	ol & sil. tt.	no	-	
			s <u>s @ 4133-</u> L_crushed			sp flour & v	rnt		
		- Lienghi - ye							
				<u> </u>		7-24-91	sina		
						nce 2-24-81 u r. thus accou			
									
									
						·-·			
	-	·	· · · · · · · · · · · · · · · · · ·			·		 	
GAS OCCURRENCE	SHOWS								
•	Total	Cuttings	Backgrou			CHROMATO	GRAPH (P)	РМ)	
INTERVAL	Gas Units	Gas Units	Uni Before	After	c ₁	C ₂	C ₃	C ₄	C ₅
4132-35	25	15	5	5	2000	tr	tr		 -
									
	 								
									1
	 			 					+
	<u> </u>	!				:	1 .		
Ditch Gas (Units):							_		_
	Background.	5				Trip	r	eaks <u>see anv</u>	
w. 0.0	15 39	w. 16	_L 8 0	OI	- card	:1 ₂ 49,000 C1 ₂ 32,000 Temp	- 61	oe :_ 113	0 C au
Mud: Wt 7.9	Vis <u>30</u>	W.L <u></u>	pn	_ & Oil		C12 == 2.2.2.2.2.2.2.1em)	p	(?)	Tr, out
Data Unit:									
Depth		S	hale Density			Dc Exponent		Pore Pressure	· · · · · · · · · · · · · · · · · · ·
3950			2.57			1.57 1.50			
4000 4050			2.56 2.54	- 		1.58		-	
4100			2.57			1.64		-	
4150			2.47			1.61			
3800	1	 -	2.57 2.56			1.57			
Dispatched Samples:	3900		2.58			1.61			
			*	1		NCD-w		Cat No	
Type Washed & Dried Die	ich		Inter 1530-40			No. of Box	cs	Set No A & B (Bxs	
Unwashed Ditch (P.			2660-42			2 (boxes 3	<u>: & 4}</u>		
Unwashed Ditch (U	SGS)		2480-38	50		2 (boxes 3	5 4)		
GeoChem (canned) Cores	•	No.	2420-38	60		4 (boxes 6	.9.10.1h	u -	
		1							

RON BROCKWAY

Geologist _____



DAILY GEOLOGICAL REPORT

WELL	KUYANAK	#1			_ Date _	2/26/81	Time	0600	
Present Depth	4614'	Рте	vious Depth _	42051		_ Footage 24	Hrs	409'	
Formation(s)	Torok			то	ор	1250'			
Present Activity:	Drillin	g							
LITHOLOGIC DESCRI	IPTION								
Interval Reported	4190-459	0	Sar	npling Interv	a!10	<u>'</u> ft.	Sample Quality	, Fair	<u> </u>
Lag Time: 58	п	nin. @46	50	_ft. (60	SPM)		,		
								Avg. D:	rill Rate
Interval				Description			<u> </u>		in./ft
4190-4204	Intb	<u>đ sh, slt</u>	st & ss as	last re	ported	<u> </u>		1.3	1
4204-4408						pt sid, sl		3.0	3
						lty, sl ca y, sil, ca		 	
		no show				,, bit, oa		1	
4408-4420	Ss.	lt brn. s	ry-brn. v f	- f grn	. SA. sl	ty, clyey,	calc.	2.2	2
		w/sh & sl	itst strgs,	lt_yel-	wh flour	. v slow p		1	
	to v	lt yel s	streaming c	rush cut	·		·····	<u> </u>	
4420-4527	Inth	xi sh. qy	brn, dk br	n qy, fi	s, slty	carb flks	1	3.0	0
	micr	<u>romicas, y</u> ovebro to	<u>v/sltst.gv</u> olt.gv.f	<u>/-brn, sl</u> - v f orn	ty, carb . clvev.	flks, mic slty, sl	sil. pt	 	
			show, tr						
4527-4533	Ss.	lt brn, i	f grn, SA,	slty, pt	v f grn	, clyey, s	il,	2,	5
		hd. no sh			_				
4533-4558	Sh,	dk gy-bri	& dk brn-	qy, fis,	slty, w	/intbd slt	st & ss	3.	9
	/00		n DACE 21						
GAS OCCURRENCE		ALTINOED OF	N PAGE 2)						
	Total Gas	Cuttings Gas	Backgrou Uni			CHROMATO	OGRAPH (PPM	<u>n</u>	
INTERVAL	Units	Units	Before	After	c_1	C ₂	C ₃	C ₄	C ₅
4560	25		5	10	2800	400 6000	100 4000	4500	tr
4560		(USING BL	ENDER		8000	6000	4000	4300	2400_
	<u> </u>						1		
B-8-1-1-1	J		<u> </u>	ļ ļ			1		
Ditch Gas (Units):									
	Background .	20	Connect	tionNo	ne	TripNone	Pcal	c as abv	<u>'</u>
W. 10	Vie 41	wı 14	ոհ 8	cc Oil - 2	* % CL	35,000 _{Tem}	1p. 95 of	in 109	or out
Mud: Wt. 10	_		_[,	_ ++	/2 01.	<u>,</u>	· r ·		
Data Unit:	,			-					
Depth			Shale Density		De	Exponent	 	Pore Pressur	re
4200			2.56			1.64			
4250			2.57			_1.69 1.62			
4300 4350			2.49	··		1.62			
4400			2.56			1.60			
4450	1		2,55			1.68		····	
Dispatched Samples:	4550		2.51 2.55			1.60			
Туре		1	Inter	val		No. of Bo	xes	Set N	lo.
Washed & Dried Dit									
Unwashed Ditch (Pa Ur washed Ditch (U)					 -				
GeoChem (canned)									

No.

Cores



resent Depth		Pre	vious Depth			Footage 24	4 Hrs		
ormation(s)				1	Гор				
esent Activity:			 						
THOLOGIC DESCR	IPTION								
terval Reported			Ѕалг	ling Inter	va!	ft.	Sample Quality	,	
terval Reported ig Time:	1	min. @	<u> </u>	ft.			,		
Interval	<u>!</u>		De	scription				Avg. D	rill Rate in./ft.
.4558-4573	Ss	1.7							
	arg	<u>& cht_grns</u>	<u>, nil - v s</u> to g strong	l por.	bri yel	-wh to dull	<u>y</u> el	<u> </u>	
	stn	 							
4573-4590	Sh,	3.8							
								 	
	NOTE	: Temper	atures "in"	and "c	out" (Di	tch Gas) fo	r 2-25-81		
		should 61° an	be 1010 and 1130 as r	<u>a 1089</u> eporteá	<u>respect</u>	ivel <u>y inste</u>	ad of	<u> </u>	
		. <u>.</u>				·		 	
				REQU	IEST: A	bout_15 Geo	chem boxes	-	
					 "				
							· - · · · · · · · · · · · · · · · · · · ·	 	
								ļ	
	Ĺ							 	
								1	
AS OCCURRENCE							 -	1	
AS OCCURRENCE	/SHOWS Total Gas	Cuttings Gas	Background Units	l Gas	_	CHROMATO	GRAPH (PPM)	
AS OCCURRENCE INTERVAL	Total		Background Units Before	ែ	c ₁	CHROMATO C2	GRAPH (PPM C3) C4	C ₅
	Total Gas	Gas	Units	ែ	c ₁	!	· — —		C ₅
	Total Gas	Gas	Units	ែ	c ₁	!	· — —		C ₅
	Total Gas	Gas	Units	ែ	C ₁	!	· — —		C ₅
	Total Gas	Gas	Units	ែ	C ₁	!	· — —		C ₅
	Total Gas	Gas	Units	ែ	c ₁	!	· — —		C ₅
INTERVAL	Total Gas	Gas	Units	ែ	C ₁	!	· — —	<u> </u>	C ₅
INTERVAL	Total Gas Units	Gas Units	Units Before	After		C ₂	C3	C4	C ₅
INTERVAL tch Gas (Units):	Total Gas Units	Gas Units	Units Before Connection	After		C ₂	C3	C4	
INTERVAL tch Gas (Units):	Total Gas Units	Gas Units	Units Before	After		C ₂	C3	C4	
INTERVAL tch Gas (Units): E	Total Gas Units	Gas Units	Units Before Connection	After		C ₂	C3	C4	
INTERVAL (tch Gas (Units): Edud: Wt	Total Gas Units	Gas Units	Units Before Connection	After		C ₂	C3	C4	
INTERVAL tch Gas (Units): E	Total Gas Units	Gas Units	Units Before Connection	After	% C1	C ₂	C3	C4	.ºF. out
INTERVAL tch Gas (Units): Lud: Wt	Total Gas Units	Gas Units	Units Before Connection ph	After	% C1	TripTemp	C3	C4	.ºF. out
INTERVAL (tch Gas (Units): Hud: Wt	Total Gas Units	Gas Units	Units Before Connection ph	After	% C1	TripTemp	C3	C4	.ºF. out
INTERVAL (tch Gas (Units): Hud: Wt	Total Gas Units	Gas Units	Units Before Connection ph	After	% C1	TripTemp	C3	C4	.ºF. out
INTERVAL tch Gas (Units): tud: Wt	Total Gas Units	Gas Units	Units Before Connection ph	After	% C1	TripTemp	C3	C4	.ºF. out
INTERVAL (tch Gas (Units): Hud: Wt	Total Gas Units	Gas Units	Units Before Connection ph	After	% C1	TripTemp	C3	C4	.ºF. out
INTERVAL itch Gas (Units): E Aud: Wt Depth	Total Gas Units	Gas Units	Units Before Connection ph	After	% C1	TripTemp	C3	C4	.ºF. out
INTERVAL Itch Gas (Units): Hud: Wt Depth Spatched Samples:	Total Gas Units	Gas Units	Connection ph nale Density	After	% C1	TripTemp	Peaks	in	oF, out
INTERVAL Itch Gas (Units): Hud: Wt Depth Spatched Samples: Type	Total Gas Units Lackground	Gas Units	Units Before Connection ph	After	% C1	TripTemp	Peaks	C4	oF, out
INTERVAL Itch Gas (Units): Full discharge and the second	Total Gas Units Lackground Vis	Gas Units	Connection ph nale Density	After	% C1	TripTemp	Peaks	in	oF, out
itch Gas (Units): Hud: Wt Data Unit: Depth ispatched Samples:	Total Gas Units Lackground Vis	Gas Units	Connection ph nale Density	After	% C1	TripTemp	Peaks	in	oF, out



DAILY GEOLOGICAL REPORT

WELL KU	YANAK #	<u>ı</u>			Date	2/27/81	Tirne	0600				
Present Depth47	15'	Prev	ious Depth _	46141		_ Footage 24 1	Hirs	101'				
Formation(s) Pe	bble Sh	ale			Тор46	543	·					
Present Activity:E	reparin	g to enter	hole_for	wiper t	rip & dri	11_40'						
LITHOLOGIC DESCR	IPTION											
Interval Reported	4590-47	15 min. @	Sa	mpling Inte	rval 10' 3 SPM)	ft. S	ample Quality_	Fair				
Interval				Description	n		1	Avg. Dri min	ill Rate 1./ft.			
4590-4601		alc.	2.1									
	carh, sl por, dull lt yel flour, g streaming lt yel crush											
4601-4643		dk brn to v			sil, mic	romicac, pt	pyr,	4.3				
			<u>.</u>									
4643-4715	bent	Sh. v dk gy, gy-blk, fis, pt flky, v carb w/buff & lt gy 2.2 bent strs; and buff, lt gy & gn zeolite, pyr ptgs & incls, occ f coal ptg & tr gn homogenous glau										
		: Ran CNI										
		Hole_i	poor co	ndition,	6 bridge	s						
		Trouble	e getting	CNL too	ol to botto	om.						
	<u> </u>	.					· · · · · · · · · · · · · · · · · · ·					
GAS OCCURRENCE	/SHOWS							<u> </u>				
	Total Gas	Cuttings Gas		ound Gas sits		CHROMATO	GRAPH (PPM)					
INTERVAL	Units	Units	Before	After	c ₁	C ₂	C ₃	C4	C ₅			
4645	50	blender	10	10	2600	1000	1000	500	200			
4657 4645	75	blender team still	10	1.5_	8500 11000	5100 2000	4900 1100	2000 1000	800			
					1							
	-			 	1				-			
Ditch Gas (Units):					40	- 250			_			
	łackground	110=20	Connec	tion1U	-40	Trip250	Peaks	as_aby	<u></u>			
Mud: Wt10.1	_ Vis _53	W.t12	ph9	_ cc Oil	%C1 ₂	34 Temp	98_oF.	in <u>111</u>	°F. out			
Data Unit:												
Depth		- SI	hale Density		Dc	Exponent		Pore Pressure	;			
4600-4650			2.54			72						
4650-4700			2.46									
			··· - ··-		 	·	· · · · · · · · · · · · · · · · · · ·					
Dispatched Samples:												

Dispatched Samples:

Турс	Lnterval	No. of Boxes	Set No.
Washed & Dried Ditch	4050~4710	2 (Box #4)	A & B
Unwashed Ditch (Paleo)	4200-4550	1 (Box #5)	
Unwashed Ditch (USGS)	3850-4710	2 (Box #5, #6)	
GeoChem (canned)	4020-4310	1 (Box #12)	
Cores	No.		



YELL	KUYANAK	#1	<u> </u>		Date	2/28/81	Time	0600	
resent Depth	4755		Previous Depth	4715		Footage 2	4 Hrs	40'	
ormation(s)									
resent Activity:									
ITHOLOGIC DES	CRIPTION								
iterval Reported	. 47 <u>15-4</u>	755	S	ampling Int	erval	10. ft.	Sample Quality	v Fair	
ag Time:	<u>58</u>	_min. @	47,00	ft.			arenipre Quanti		·
Interval								Ave. Dr	rill Rate
4715-4755	- Ch			Descriptio			· ·	mi	n./ft.
	_inc.	l & ptgs.	1t gy bent	strgs v	w/ lt qy	blky, carb, & gn zeolit	pyr e, tr	5.5	
	dk 1	brn, ls n	ods, occ sl	tst & s	s lams	<u> </u>			
							<u> </u>	 	
	 								
					·			 -	
					_				
	-								
						· · · · · · · · · · · · · · · · · · ·		+	
- 	 		 -		··				
			·						
AS OCCURRENC	E/SHOWS		 -	·				<u> </u>	<u> </u>
	Total Gas	Cuttings Gas	Backgro Un			CHROMATO	GRAPH (PPM)	
INTERVAL	Units	Units	Before	After	C ₁	C ₂	C ₃	C ₄	C ₅
4755	250	(steam_ still}	-		15.400	2500	2500	1200	800_
- .	 				<u> </u>				
			<u> </u>		<u> </u>				
· · · · · ·	+-+								
			<u>, </u>		<u> </u>	i	····		<u> </u>
tch Gas (Units):	Background	15	Connec	tion		Trip as al	ov Peaks		
<u>fud:</u> Wt10.	4 Vis 92	W.L. 1	2ph8.0	_ cc Oil	% C1	2 34000 Temp	oF.	in	F. out
ata Unit:									
Depth			Shale Density			-			
		<u>-</u>	Silate Density			Exponent		Pore Pressure	
		.,.							
								. -	
					· · · · · · · · · · · · · · · · · · ·				
spatched Samples:		<u> </u>	<u>-</u> -	·		<u>.</u>	 	\. • <u>•</u>	
Турс		<u> </u>	Înterv	na 1	····	No of B		0-431	
Washed & Dried Di	tch		2(14)			No. of Boxes		Set No.	
Jawashed Ditch (F Jawashed Ditch (C									
GeoChem (canned						·			
Cores	 ·· ·	No.	<u> </u>		<u>_</u>	····			
ologist	RON BROC	KWAY			_		V · · ·		



Feedoms Phil Renautably

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

VELL	KUYANAK #	11			_ Date	3/1/81	Time	0600	
resent Dopth	4755'	Prev	ious Depth	4755	51	Footage 24 F	bs	<u>-</u>	
Formation(s)	Pebble Sh	ale		То	op	4643'			
resent Activity:	Building	mud to 11.	3 & condi	tioning	hole.				
ITHOLOGIC DESC	CRIPTION								
interval Reported	· · · · · · · · · · · · · · · · · · ·		San	npling Interv	al	ft. Sa	ample Quality		<u> </u>
Lag Time:		min. @		_1t.					
Interval			,	Description				Avg. Dri	ili Rate 1./ft.
III(ct 421	LOGS:	DLL.	1515' to 4	Description 756				1	
		BHCS.	1515' to 4	7481	<u> </u>	<u>-</u>			
		LSS, Dipmete	(no depth r (aborte	d due to	hole (conditions)			
	PREL	IMINARY:	Electric I	.ogʻCalcu	lation	s (assuming R	w = .31)		
1878-1887	31%	porosity,	40% ዘ _ጋ 0		· -			-	 .
4508-4522	15%	porosity,	56% H ₂ O						
4550-4556	18%	porosity.	58% н ₂ 0						
4562-4568	16%	porosity.	40% Н ₂ 0					<u> </u>	
4572-4576	20%	porosity.	40% H ₂ 0			· - · · · · · · · · · · · · · · · · · · ·			
4616-4622	22%	porosity,	60% Н ₂ 0	- · · ·					
				· · · · · · · · · · · · · · · · · · ·					
GAS OCCURREN	Total	Cuttings	Backgrou	ınd Gas		CHROMATO	GRAPH (PPM	0	
INTERVAL	Gas Units	Gas Units	Uni Before		Cl	C ₂	C ₃	C ₄	C ₅
HVIERVAL	Ones i	Onics	belore	- Fixer					
									
· · · · · · · · · · · · · · · · · · ·	_			1		-		 	
									
Ditch Gas (Units):									
pitali odo (orazy.	Background		Connec	tion		Trip	Peal	a ——	· · · · ·
Mud: Wt. 10.	.8 Vis 85	W.L12	ph8.0	cc Oil	%	C1 ₂ 30,000 Temp	°F	. in	_oF. out
Data Unit:									
Depth	<u> </u>	1 - 3	hale Density			Dc Exponent		Pore Pressur	
200									
		-							
			w · -						
		1		1					
Dispatched Sample	ec.	· .							
	rpe		Inter	val		No. of Box	es l	Set N	0.
Washed & Dried				· 					
Unwashed Ditch	(Paleo)								
Unwashed Ditch GeoChem (cann									
Cores	-,	No.							

6 200



DAILY GEOLOGICAL REPORT

WELL KUYANA	K #1		 		Date	3/2/81	Time	0600	
Present Depth47	55 (drill	<u>ler)</u> Pre	vious Depth _			Footage 24 }	irs		
Formation(s) Pel									
Present Activity:Ci									
LITHOLOGIC DESCR	IPTION					,			
			Sa	maline later	-val		male Cuality		
Interval Reported Lag Time:		nin. @		ft.	-a: <u></u>	1. Şa	inple Quality		
								4 D	
Interval			·			•.			rill Rate n./ft.
1st run	Rand	lipmeter,	tore off	arm @ 40	50¹ in.	tight spot. king.		<u> </u>	
3rd run			nrvey, go						
4th_run	Rand	dipmeter_t	0 4000	good log	(1515)	-4758' total r	ານກ)		
5th run	Ran s	sidewall c	ores, sho	t 30, re	covered	30.			
	NOTE:	Schulum	berger TD	is 4758	'.			<u></u>	
					 -			 	
									
	<u> </u>								
								 	
								·	
				· · · · · · · · · · · · · · · · · · ·				 	
							_	<u> </u>	
									
				·				 	
								<u> </u>	
GAS OCCURRENCE		Control	D 1						
	Total Gas	Cuttings Gas	Backgrou Uni	its		CHROMATOGI			1 5
INTERVAL	Units i	Units	Before	After	c ₁	C ₂	С3	C ₄	C ₅
•						+		 	
						 		-	
						 	<u></u>	 	
		<u> </u>			[
Ditch Gas (Units):									
Enteri das (dinis).	ackground _		Connect	tion	<u> </u>	_ Trip	Peaks		
Mud: Wt11.4	- Vis 81	W.L6	ph	_ cc Oil	%C	1 ₂ 18000 Temp.	°F.	in	.ºF. out
Data Unit:									
\									
Depth		וצ,	hale Density		1	& Exponent	ļ	Pore Pressure	
			· · · · · · · · · · · · · · · · · · · 				+	·	
		·							
							<u> </u>		
				· <u>-</u>			- 		
Di			¥-F					 -	
Dispatched Samples:									
Туре			Interv	72]		No. of Boxes		Set No).
Washed & Dried Ditte									
Unwashed Ditch (Pa Unwashed Ditch (US		+							
GeoChem (canned)									I
Geochem (camied)									

Footogist RON BROCKWAY



DAILY GEOLOGICAL REPORT

<u>T</u>	KUYANAK #	1			Date_	3/3/81	Time	0600	
ent Depth	4755'	Pre	vious Depth_			Footage 24	Hrs.	<u> </u>	
nation(s)	Pebble Sh	ale			Тор	4643'			
ent Activity:	Running 9	-5/8" Casi	ng.						
HOLOGIC DES	CRIPTION								
rval Reported _ Time:	1	min. @	Sa	ampling Inte	rva]	ft. 5	Sample Quality	<i>'</i>	 -
Interval	1			Description				Avg. Dr	ill Rate n./ft.
				·				<u> </u>	
									<u>-</u>
·									
				<u>. </u>				 	
			· · · · · · · · · · · · · · · · · · ·					<u> </u>	
								<u> </u>	
-	<u> </u>						<u></u>		
									
						· · · · · · · · · · · · · · · · · · ·			
									_
-									
S OCCURREN	l ICE/SHOWS						· · · ·	.1	
	Total Gas	Cuttings Gas		und Gas uits	,	CHROMATO	GRAPH (PPN	n	
INTERVAL		Units	Before	After	c ₁	C ₂	Сз	C ₄	C ₅
				<u></u>					 -
								 	
	•					·			·
h Gas (Units):	Background		Соллес	tion		Trip	Peal	os	
- 3164	. 15.	M/ T	عد -	0:1	 61	₂ Тетр	0.5		05
<u>:d:</u> Wt	YIS	W.L	pn	_ & 011	70 U1	2 ——		. in	or, out
ta Unit:									
Depth		sı	ale Density		Do	Exponent		Pore Pressure	:
	· · · · · · · · · · · · · · · · · · ·				 		-	<u>.</u> ,	
								· · · - · ·	
			-						
atched Sample	es:								
									
Ty	-		Inter	val		No. of Boxe	·s	Set No	o
ashed & Dried	pe Ditch		Inter	val		No. of Boxe	: s	Set No	o
	pe Ditch (Paleo) (USGS)		Inter	val		No. of Boxe	:	Set No).

P 45



WELL ____

KUYANAK #1

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

Date 3/4/81 Time 0600

Present Depth	4755'	_ Previo	us Depth _	4755'		Fc	otage 24 H	is0		<u> </u>
Formation(s)	Pebble Shal	.е			Top464	3' (I	.og)			
Present Activity:	Working on	BOP's,	Nippling	Down						
LITHOLOGIC DESCR	IPTION									
Interval Reported Lag Time:	min, (<u> </u>	Sa	mpling Inte	rval		ft. Sar	mple Quality _	-	
Interval		<u>-</u>		Description					Avg. Dr.	ill Rate n./ft.
-	Ran 111	joints	9 <u>-5/8"</u> c	asing to	4755					
								_		
				 -					· · · · · · · · · · · · · · · · · · ·	
								-		
					REQUEST	:1_	Filame:	nt tape.		
		·				Sc	otch. 1	o rolls.		
							·			·
	<u> </u>									
						_				
· <u>-</u>		• • • •			<u> </u>	-				
				··· <u>-</u>						
GAS OCCURRENCE		tings	Backgrou	ind Cae		CUD	ብ እ የልተሰነት ሀ	карн (ррм)		
INTERVAL	Gas C	as nits	Uni Before [C ₁	1	c_2	C ₃	C ₄	C ₅
111121112						<u> </u>				
										
						ļ <u>.</u>				
	<u>!</u>			_	<u>!</u>	1				<u> </u>
Ditch Gas (Units):	Background		Connect	ion		. Trip_	·	Peaks .		
	-					_				
Mud: Wt	_ Vis W.	L	ph	_ cc Oil	% C1	2	Temp	oF.	in	^o F. out
Data Unit:										_
Depth		Shale	Density		Do	e Expon	ent	P	ore Pressure	
							- - ·			
						. <u> </u>				
								ļ		
Dispatched Samples:	-								-	
Туре			Interv	al		No	of Boxes		Set No.	
Washed & Dried Dite Unwashed Ditch (Pa	leo)									
Unwashed Ditch (US GeoChem (canned)										i
Cores		No.								
	מותעאים ודמ	ne.					} :	.		

Controlled BILL REYNOLDS



Cares

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

ELL	KUY	ANAK #1			Date	3/5/81	Time	0600	
sent Depth	47551	Previ	ous Depth _	4755*		Footage 24 Hrs		0	
						131			
sent Activity:									
THOLOGIC DESC									
terval Reported			Sar	npling Interva	1	ft. Sam	ple Quality		
g Time:	a	nin. @		_ft.					
								Avg. Dri	ll Rate
Interval	NOTE.	Fet dri		Description	er casi	ng 3/6/81 (AM) at	1 ,,,,,,,,	
	NOIE:								
	-			· · · · · ·				<u> </u>	
								<u> </u>	_
			····	<u> </u>			<u> </u>		
								-	
					-				
						· · · · ·		-	
					-				
	 		 -						
	 								
									· · · · · · · · · · · · · · · · · · ·
GAS OCCURREN	CE/SHOWS		 -						<u></u>
	Total Gas	Cuttings Gas	Backgro Un			CHROMATOGR			1 6-
INTERVAL	Units	Units	Before	After	C ₁	C ₂	Сз	C ₄	C ₅
	 			1					
									
	1								
						<u> </u>			
<u> </u>	. l	<u>-</u> _		· · · · · · · · · · · · · · · · · · ·			<u> </u>		
itch Gas (Units):	Background		Connec	tion		Trip	Peal	ks	
Pit Sa	mple	_				50000 —	0.		0=
Mud: Wt10	9 Vis 90	D_ W.L_9	ph8_!	_ cc Oil		2 50000 Temp		. in	_or. out
Data Unit:									
Depth		5	hale Density	· 	Dx	Exponent	<u> </u>	Pore Pressur	•
Deput			inio Bollint,						
	·····	<u> </u>					╂		
							1		
	 _	 					1		
01 11 12 1		•	<u></u>	, , , , , , , , , , , , , , , , , , , 					
Dispatched Sample	<u>×:</u>								
Ty			Inte	rval		No. of Boxes		Set N	0.
Ty Washed & Dried Unwashed Ditch	Ditch		Inte	rval		No. of Boxes		Set N	0.
Washed & Dried	Ditch (Paleo) (USGS)		Inte	levi		No. of Boxes		Set N	o.



LL	KUYANAK ∮I	L			_ Date_	3-6-81	_ Time_	7 AM	
ent Depth	47551	Prev				_ Footage 24 Hr	s	0	
	PEBBLE_SH								
	WOC								
OLOGIC DES	SCRIPTION				_				
val Reported .		nin. @	Sar	npling Inter ft.	'al	ft. San	iple Qualit	у	
11101									
Interval			:	Description				Avg. Dr , min	ill Rate n./ft.
Mitetaat	Lavino	down 7" d			ting on	cement (WOC)	hope		
	to dri	11 out in	next 24 h	rs., con	ld be 48	hrs.			
									
								 	
								<u> </u>	
 		<u></u> ·			<u> </u>				
							··-		
	,					·	_	<u>_</u>	
	<u> </u>								
· - · · · · · · · · · · · · · · · · · ·									
									
				.					
	-	<u> </u>							
S OCCURRE	NCE/SHOWS	-							
	Total Gas	Cuttings Gas	Backgrou Uni			CHROMATOGE			1 6-
INTERVAL		Units	Before	After	C ₁	C ₂	С3	C4	C ₅
						 		1	
				L					
									-
h Gas (Units)			Connec	tion		Trin	Per	oks	
:h Gas (Units)	: Background		Connec	tion		Trip	Pe:	sks	
11	Hackground					Trip			
ad: Wt. 11	Hackground								
ad: Wt. 11	Hackground								
nd: Wt. 11	Hackground	W.L_12			<u>)</u> %- € CI				_OF, out
id: Wt. 11	Hackground	W.L_12	ph8		<u>)</u> %- € CI	2 3300 Temp		F. in	_OF, out
id: Wt. 11	Hackground	W.L_12	ph8		<u>)</u> %- € CI	2 3300 Temp		F. in	_OF, out
id: Wt. 11	Hackground	W.L_12	ph8		<u>)</u> %- € CI	2 3300 Temp		F. in	_OF, out
ad: Wt. 11	Hackground	W.L_12	ph8		<u>)</u> %- € CI	2 3300 Temp		F. in	_OF, out
ad: Wt. 11 ta Unit: Depti	Hackground 1.2 Vis 94	W.L_12	ph8		<u>)</u> %- € CI	2 3300 Temp		F. in	_OF, out
ad: Wt. 11 ta Unit: Depti	Hackground 1.2 Vis 94	W.L_12	ph8		<u>)</u> %- € CI	2 Temp.	0	F. in Pore Pressur	oF, out
Depti	Hackground 1.2 Vis 94 h	W.L_12	ph8	_ cc Oil _C	<u>)</u> %- € CI	2 3300 Temp	0	F. in	oF, out
nd: Wt. 11 ta Unit: Depti patched Samp	Hackground 1.2 Vis 94 h	W.L_12	ph 8	_ cc Oil _C	<u>)</u> %- € CI	2 Temp.	0	F. in Pore Pressur	oF, out
Depti	h bles: ype d Ditch h (Paleo) h (USGS)	W.L_12	ph 8	_ cc Oil _C	<u>)</u> %- € CI	2 Temp.	0	F. in Pore Pressur	oF, out



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TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

VELL	KUYANA	<u>.K</u> #1			Date_	3/7/81	Time	0600	
resent Depth	4755'	Pre	evious Depth	47551		Footage 24 Hrs	i	0	_
ormation(s)	Pebble Sh.	· · · · · · · · · · · · · · · · · · ·			Гор	4643*			
esent Activity:	Test BOP		<u>. </u>			.			
THOLOGIC D	ESCRIPTION								
terval Reported	l		San	npling Inter	val	ft. Sam	ple Quality		
g ime:		mun. @		_n.					
Interval	<u> </u>			Description				Avg. Dr min	ill Rate 1./ft.
									
							-		
			_						
									-
								<u></u>	· · · · · · · · · · · · · · · · · · ·
								ļ <u> </u>	
		•							
						<u> </u>			
									
							_		
			·	-					
AS OCCURRI	ENCE/SHOWS			.				1	
	Total Gas	Cuttings Gas	Backgrou Unit			CHROMATOGR	APH (PPM)		
INTERVA		Units	Before	After	c ₁	C ₂	c ₃	C4	C ₅
								 	┼
		-							
									<u> </u>
	-					 		 	
						· · · · · · · · · · · · · · · · · · ·		I	
tch Gas (Units	<u>;.</u> Background		Connecti	on		Trip	Peaks		
	1 2 12 10	2 14	. 10	0:1	0 ~~.	2 32K Temp	- ^-		a_
lud: Wt1	1.2 VIS 20	·- W.L	<u> </u>	. сс Оц	% CI	2 lemp	°F.	ır ———	out °F. out
ata Unit:									
Дер	th	S	Shale Density	1	De	Exponent		Pore Pressure	
	<u></u> .								
									
								-	
spatched Sam	ples:								
	Ѓуре		Interv	<u>.</u>		No. of Boxes		Set No	
									-
	d Ditch			-		110.01 BOXCI			
Washed & Drie Unwashed Dito Unwashed Dito GeoChem (car	d Ditch ch (Palco) ch (USGS)					THO, OI BOXCI			

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TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

WELL	KUYANAK #1				_ Date	3/8/81	_ Time_	0600	
Present Depth						Footage 24 Hr			<u> </u>
Formation(s)	Pebble Sh.		 	To	р	4643'			
Present Activity:	Circulating	- drilled	out shoe	-					
ITHOLOGIC D	ESCRIPTION								
Interval Reporte	dr		San	npling Interva	ı)	ft. San	nple Quality	у	
Lag Time:	г	nis. @		_rt.					
Interval	,		1	Description					rill Rate in./ft.
				Description					
			_						•
									
							•	-	
	- 				-			-	
GAS OCCURR	ENCE/SHOWS			-					
	Total Gas	Cuttings Gas	Backgrou Uni			CHROMATOGR	APH (PP)	<u>4)</u>	
INTERV		Units	Before	After	C ₁	C ₂	C ₃	C4	C ₅
						 		 	
Ditch Gas (Unit	s).								
	Background.		Connect	ion		Trip	Pea	ks	
Mud; Wt	10.5 Vis 45	W.L. 22	ph_ <u>11.0</u>	_ cc Oil _0	%(Cl ₂ 33KTemp	oF	. in	_oF. out
Data Unit:									
							_		
Der	pth	Sh	ale Density		1	Dc Exponent	<u> </u>	Pore Pressur	e
					-				
									
Dispatched San	nples:								
	Туре		Interv	al		No. of Boxes		Set N	о.
Washed & Dri Unwashed Di								<u> </u>	
Unwashed Dit GeoChem (ca	tch (USGS)								
Cores		No.	·						
Canlories	BILL REYNOLD	s				· •	<u>(</u> . 20		



DAILY GEOLOGICAL REPORT

WELL	KUYANAK	#1				Date 3/9/81 Time_			0600	
Present Depth _	4965'		Рте	vious Depth _	4767	<u> </u>	Footage 24	4 Hrs	198'	
Formation(s)	Pebble S	h	···			Гор	4643'			
Present Activity:	Trippi	ng out	to cor	e.						
LITHOLOGIC D										_
	d 475	- 0-4965	@ 49	San	npling Inter _ft.	val	10 ft.	Sample Quality	/ <u>Good</u>	
Interval	ı			1	Description					rill Rate n./ft.
4750-47	60 8	0% cmt	., 20%	sh, m gy s	li slty.	, fairl	y soft	-	4	.12
4760-47	80 9	h, m g	y, sli	slty, fair	ly soft	, tr co	al, pyr & be	nt.	4	. 29
4780-48	30 5	h, m b	rn/qy -	dkgy - s	li slty.	fairl	y soft, w/ f	ltg,	3	. 28
4830-48	90 5	հ. ա գ	y/brn g	<u>y, sli slt</u>	y, fair]	ly soft	n. tr pyr & . . w/qtz grn	& occ.	3	.1
	1		grn a/a 		occ tr	dk brn	<u>ls frag (no</u>	d) tr.	- 	
4890-49	10 6	'h =		/		fairl	hard, tr p			
				-	•					.4
4910-49	4						& free fine tr. m gy ls	_	2	. 5
	-								 	···-
								<u> </u>	 	~
CASOCCUER	ENCERCHO	170			_				1	
GAS OCCURR	To		uttings	Backgrou	nd Gas		CHROMATO	GRAPH (PPM	0	
INTERVA	Ga AL Un		Gas Units	Unit Before (s After	C ₁	C ₂	c ₃	C ₄	C ₅
4750-47		<u> </u>	30	-	-	5000	Tr	Tr	Tr	
4760-47			25	-		2800	Tr	Tr	Tr	
4780-48		+-	30			2800	Tr	Tr		
4830-48 4890-49		+	27			3300	Tr	Tr	 -	
4910-49			29			3200 3200	Tr Tr	Tr Tr	Tr	-
									<u> </u>	
Ditch Gas (Units	- Backgro						Trip			
Data Unit:										
Dep	oth		S	hale Density		1	Dc Exponent		Pore Pressure	
4750	-4760			2.46			1.75		<u>-</u>	
1	-4780			2.52			1_70			
r· — - ·)-4830			2.44			1.67			
1)-4890			2.43	+		1.72			
1)-4910)-4965			2.46 2.46			1.69			
Dispatched Sam		·			•					-
	Туре			Interva	ıl	Γ	No. of Box	es	Set No	<u>, </u>
Washed & Drie										
Unwashed Dit	ch (USGS)									
GeoChem (ca	nnegj		No.							
			1 110.							

1 250

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TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

LL KUYANA					3/10/8i		0600	
ent Depth5	022'	Previous Dept	h <u>4965'</u>		Footage 24 l	Hrs	57 '	
sation(s)P	ebble Shale	<u></u>	т	ор	4643'			
nt Activity:C			<u></u>					_
HOLOGIC DESCI				. (Cori	ing) c c	1.0.16	Poor	
rval Reported Time:2	4965-5022	. @ 5022	_ Sampling Inter	val	ing)ft. S	ample Quality		
1 Imc		i. e						
							Avg. Dril	Rate
Interval	1		Description				min.	<u>. </u>
965-5022	Appear	s to be sh as p	reviously r	eported			3.4	
							<u> </u>	
	ļ <u>.</u>			<u></u>	· · · · ·			
							1	· · · -
							ļ <u> </u>	
							 	
· 			·· ·-					
		<u> </u>					-	
	 							
						· - ·	 	
			-					
							Ţ. <u> </u>	
								
AS OCCURRENC	F/SHOWS	(NOWE)	· · · · · ·				·	
13 OCCORNE	Total	(NONE) Cuttings Back	ground Gas		CHROMATO	GRAPH (PPM	1)	
INTERVAL	Gas Units	Gas Units Before	Units 2 After	c_1	C ₂	c_3	C4	C ₅
HALEKAND	T	J. J			4			
							 	
· · · · · · · · · · · · · · · · · · ·	 			1	 		-	╁-
	 							<u> </u>
				[1				
			!	<u>!</u>				<u> </u>
ch Gas (Units):							V	
oda (Olita).	Background	8Co	nnection13		_ Trip30	Peal	oNone	
					30000 -	74 0-	. 79	
<u>ud:</u> Wt10.	1_ Vis39	W.L. <u>14</u> ph	<u>8.5</u> cc Oil	<u>∪</u> %C	12 30000 Temp) OF	. in	or. out
ata Unit:								
<u> </u>								
Depth		Shale Dens	ity	1	C Exponent		Pore Pressure	
5020		2.44			1.71			
 -								
			<u> </u>	L				
spatched Samples	s:							
	-						FI - 2*	
Тур			Interval		No. of Box	es	Set No),
Washed & Dried I Unwashed Ditch (. <u>.</u>					
Unwashed Ditch (USGS)							
GeoChem (canne								 .
Cores		No.				<u>L</u>		



DAILY GEOLOGICAL REPORT

/ELL KUYANAK #		#1	 		Date_	3/11/81	Thre	0600	
	50251	Pres	rious Depth _	5022		Footage 24 Hrs.		31	
mation(s)	Pebble Sh	ale		To:	o	46431			÷
sent Activity:									
•		•							· · · · · ·
HOLOGIC DES							•		
rval Reported	4965-502	4' nin. @	Sar	mpling Interval	l	ft. Samp	le Quality.	 -	
1111161	···	.ш., С							
				_				Avg. Dri	I Rate
Interval	 			Description	63			min	./ft.
4965-5024	Cut	Core #1 (recovered	58.2', 98.	.bs rec	overy)			
4965-5023.	2 Sh,	m-dk gy,	al sity to	slty, w/	f-crs,	SR-R, in pt f	ros	16	-18
	filtq	qtz qrns	w/ mica,	pyr, carb	frags	& lams & a few	fish		<u>-</u>
	scal	es, teeth	, & skelet	al frags;	fairly	hd, s amt sks		 	
	_			i					<u>-</u>
									<u>-</u>
				,			_,		
		·						 	
									
-			·						
			• •					<u> </u>	
								 	
								 	
							•	1	
AS OCCURREN		a							
	Total Gas	Cuttings Gas	Backgrou Uni	its 🗀		<u>CHROMATOGRA</u>			L c-
INTERVAL	Units	Units I	Before	After	Ci	C ₂	Сз	C4	ᅜ
					•			 -	
· · ·			 			1		1	1
							·		
				<u> </u>		<u> </u>		<u> </u>	<u>l </u>
ch Gas (Units):									
en ous (ound).	Background.	5-10	Соплес	tion		. Trip30	Peak	s	
	4 45	17		.					
<u>ud:</u> Wt 10	-4 Vis 42	W.L_ <u>12.</u>	<u>o</u> ph	2, cc Oil _O	% C1	2 34000 Temp	74°F.	in	^O F. out
ata Unit:									
Depth		S	hale Density		D	c Exponent		Pote Pressure	
4950-5000			2.44			1.66			
<u> </u>									
									
		L <u></u>		L					
spatched Sample	es:								
7√	/pe	·	Inter	val	<u> </u>	No. of Boxes	1	Set No) ₄
Washed & Dried			24,444			The second			
Unwashed Ditch	(Paleo)					· —————			
Unwashed Ditch GeoChem (cann	(USUS) ed)								
Cores		No.	_				<u> </u>		

N. St



DAILY GEOLOGICAL REPORT

WELL	KUYAN	AK #1			Date	3-12-81	Time	0600	
Present Depth									
Formation(s)									
Present Activity:									
LITHOLOGIC DES	•								
Interval Reported		5-50751	Sam	nling Interval		_ft. S	ample Quality		
Lag Time:	30	min. @	5072	_ft.		ft. S			
		•	•					Avg. Dri	ill Rate
Interval		· 		escription			<u> </u>	mis	ı./ ft.
5024-5075			', Rec. 50.		bls an	d 0.1' thm	gl at	20	- 21
	50721;	also 0.8	' Ls, 1.4'	Sh, rbly,	broke	n.			
								 	
		<u> </u>							
· · · · · · · · · · · · · · · · · · ·								1	
								<u></u>	-
••	+							 	
			· · · · · · · · · · · · · · · · · · ·						
	1						···	 	
						 	· ·	 	
								 	
GAS OCCURRED		0	7 5 - 1			OTTO ON CA TOO	an a nya mpa a		
	Total Gas	Cuttings Gas	Backgrow Unit	· _		$\begin{array}{c c} CHROMATO \\ \hline & c_2 \end{array}$	<u></u>	, C ₄	C ₅
INTERVAL	. Units	Units	Before	After	<u>c</u> 1				-3
			 		·	 	·	 	 -
			 	-			·		+
· · · · · · · · · · · · · · · · · · ·	!		11			<u>. </u>			
Ditch Gas (Units):	Dartananad	5	Canasti	la a		Trip20	Dante	_	
									•
Mud: Wt. 10	0.2 Vis 42	W.L. 14	ph8.0	cc Oil 0	% C1	2 34000 Temp	69of.	in _87	.oF. out
						_			
Data Unit:									
Depth)	1	Shale Density			c Exponent		Pore Pressur	
5025	-5075	<u> </u>	2.46			1.70			
		<u> </u>	····································	-					
		 					<u> </u>		
		·····					-		
Dispatched Sample	les:							•	
T	уре		Interv	al		No. of Box	2	Set N	٥.
Washed & Dried									
Unwashed Ditch Unwashed Ditch									
GeoChem (can									
Cores		No.		····	— .				
	рт:	פת זמניציז כ				K-27			



<u> ELL</u>	KUYANAK	#1		Date_	3/13/81	Time	0600	
sent Depth	5153'	Previous Dept	յի <u>5075՝</u>		Footage 24 Hr	s	78	
					-			
		Core #3)		, —		_		
						···	··-	
THOLOGIC DESC		531			10		D	
erval Reported g Time:31	20/3-31	nin. @ 5100	_ Sampling Inter ft.	rai	10 ft. Sam	ple Quality.	Poor	
Interval	,		Description	ı			Avg. Do	ill Rate n./ft.
5075-5080	Pred	cvgs w/tr clys		·			 	-
F000 F000	 	7.						
5080-5093		lt-m gy, f - m g are tr por	rn, quz, sa	W/ abur	i glau, fis, t	<u>t,</u>		
					<u>.</u>	· ·		_
5075-5090	(Dri	ll rate only)	<u></u>		·- <u>-</u> -		5.	.0
5090-5093	(Dri	ll rate only)					2	. 0
			· · · · · · · · · · · · · · · · · · ·				 	<u>.</u>
		ng time on Core						
		5093-5097 5097-5103	<u> </u>	in.			 	<u>-</u>
		5103-5138	• - 6-8 п	nin.				
.		5138-5153	<u> </u>	min.			<u>. </u>	
			• • •					
							 -	
····						·		
	 -	· - · <u>-</u> · · · · · · · · · · · · · · · · · · ·					 	
AS OCCURRENCE	CE/SHOWS				Contrings	ann!		
	Total Gas	Cuttings Back Gas	ground Gas Units		(cuttings CHROMATOGR	APH (PPM)	<u> </u>	
INTERVAL	Units		After	C ₁	C ₂	C ₃	C ₄	C ₅
5090-93 5100	10-1	20 <u>5</u> 40 5	5	2500 4500	800	800	tr	 -
				- 1300	1200	1900	800	
				<u> </u>	ļ			
				<u> </u>	<u> </u>			
	1	1	<u> </u>	<u>!</u>				
tch Gas (Units):								
,	Background,	5Cor	nection	-	Trip	Peaks	; -	
W. 10	3: 10. AO	W.L14.4 ph	P 0 0a 6	ח מיים	32000 m	67 pr	. 05	07
<u>fud:</u> Wt_10.	4R 4 A	W.L	<u> </u>	Z	12 <u>52000</u> 1emp	<u> </u>	ın <u></u>	.~F. out
ata Unit:				•				
Depth	·····	Shale Densi	in I	n	c Exponent		Pore Pressure	
5075-5100		2.44	ivy	<u>_</u>	1.78		FOIC FIESSMIT	
5100-5150		2,46			1.58			
								
						-		
	,	<u></u>				!		
ispatched Samples	<u>ı:</u>							
	×		nterval	 	No. of Boxes		Set No	<u>, </u>
Washed & Dried I	Ditch							
Unwashed Ditch (Unwashed Ditch (
GeoChem (canne								
Coret		No		i		i -		7



Cores

No.

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

VELL	KUYAN	AK #1				_ Date_	3/14/81	Time	0600	
					5153'		Footage 24 H	ir	33'	
					т.	op	5090' (drlg.	time & sa	umples)	
			hole w/ «			•		_		
ITHOLOGIC			•							
Interval Report	ed 50	 193-5186	i	ς,	moline Interv	al (Co	ored) ft. Sa	male Ouslity		
ag Time:	30		min. @5	155	ft.			mpro Quanty .		
									Avg. Dri	ill Rate
Interva	4		<u> </u>		Description					n./ft.
<u> 5093-5</u>	5153						ss, lt qy, f fri w/ diffic		 -	
		pate	hy cly cm	t here & t	there, por	is f'.	overall w/ 20	0-35	İ	
							cut, no petro		1	
		odoı	<u> </u>	 	<u> </u>			<u> </u>	 	
5153-	5186						1.6' ss as ab			
							ottom ±2'; co		 	
			l fos, fa						ļ	
		515	3-5163	Core #4	. drilling	r time	only		1	4
		516	1-5165	Core #4	. drilling	g time	only	·······	+	9
		516	5-5168		<u>. drillin</u>				 1	.8
		-	•							-
			-	<u> </u>	 	REOU	EST: White P Bags		+	
							U.S.G.S	, labels		····
							Core La	<u>bels</u> Mgr. lab	416	.
					····			oof marki		(small)
GAS OCCUR	RENCE		(NONE)			_				
		Total Gas	Cuttings Gas		ound Gas oits [CHROMATOG	_	7	1 6-
INTER	VAL	Units	Units	Before	After	C ₁	C ₂	Сз	C ₄	C ₅
										···-
				·· -·· ·	1		1		1	ļ
					 		11		 	
		<u> </u>			<u> </u>		<u> </u>		<u> </u>	<u>.l</u>
Ditch Gas (Ur	its):		0-5				- _ Trip10	D 1.	_	
Mud: Wt.	10.3	Vis 39	W. <u>r12</u>	.6 _{ph} 8.0	cc Oil	% C	1 ₂ 34000 Temp.	of.	in	oF, out
				•			•			
Data Unit:										
) <u> </u>	epth		2	Shale Density		I	Oc Exponent		Pore Pressure	ŧ
5150-	-517 5						1.79			
					+					
<u> </u>				**				1	<u> </u>	<u>.</u>
Di	1-				<u> </u>					
Dispatched Sa	amples:									
	Туре			Inte	(Asj		No. of Boxes		Set No	0.
Washed & Unwashed										
Unwashed I										
GeoChem (canned)									



Cores

No.

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL	KUYANAK	#1 .			Dzte	3/15/81	Time	0600	
Present Depth	5401'	Pre	vious Depth	5186	• .	Footage 24	Hrs	2151	
Formation(s)	Kingak				Тор	5073*			
Present Activity:	Tripping	for new]	bit.						<u> </u>
LITHOLOGIC DESC	RIPTION								
Interval Reported Lag Time:37			Sam	pling Inter	rval	10' ft.	Sample Quality_	Fair	
Lag Time: 37	1	min. @	5350	_ft.					
Interval			T	\nea-intion				Avg. Dri	ill Rate n./ft.
5186-5300	Sh,	m – dk gy		escription of slty.		splty, fairl	y hd		-6
5300-5400	55.	- 2 Day 6 6	1tet varvin	a from	1+ m	to tan to m g			-7
	mino	r pt w/ n	ica, tr pyr	, occ v	/ glau	, fairly hd	ула	4	
~	<u> </u>	·				· - · - · ·	•		
	ļ					··			
								<u> </u>	
	-								
									
								<u> </u>	
	 				····				
	 					_	 ·		<u>_</u>
GAS OCCURRENC								,	
	Total Gas	Cuttings Gas	Backgrour Unit:				GRAPH (PPM)	1	
INTERVAL 5351	Units 150	Units 180	Before	After	C ₁	C ₂	C ₃	C ₄	C ₅
2331	150	190	50	30	-		<u> </u>		 -
					<u> </u>		····		1
	1								
	+ +			- · · - · ·	 		<u> </u>	<u> </u>	
	<u></u>		<u> </u>		•	'	<u> </u>	150 @ 5	-
Ditch Gas (Units):	Background	20-30	Connecti	on	-	Trip5	Peaks		
				'	•	20000	0.3	100	
Mud: Wt. 10.	2 Vis 44	W.I.	15 ph 8	. cc Oil	<u>-U</u> %	Cl ₂ _29000 Tem	p. <u>82</u> °F.	in	.ºF. out
Data Unit:									
Depth			hale Density			Dc Exponent		Pore Pressure	<u> </u>
5200-5250			2.47			1.80		-	·
5250-5300			2.48			1.91		-	
5300-5350 5350-5400			2.48 2.48			1.87			
Dienstehad Camalan		<u> </u>			L				·
Dispatched Samples	•								
Type Washed & Dried D			Interva	<u></u>		No. of Box	es	Set No	0
Unwashed Ditch (Paleo)								
Unwashed Ditch (GeoChem (canned			<u>.</u>						
Cannot	<u>, </u>								

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Cores

No.

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL 1	CUYANAK #	1			Date_	3/16/81	Time	0600	
resent Depth5	5531	Pre	evious Depth _	5401'		Footage 24 H	ln	152'	
ormation(s)X			-			_			
resent Activity:									
LITHOLOGIC DESCR Interval Reported		30	C			ft. Sa		COOD	
Lag Time: 37	1 1	nin. @ 55	30 Su	mpung inter ft.	Y21		mpic Quality _	<u> </u>	
								Aug D	rill Rate
Interval	<u> </u>			Description					n./ft.
<u> 5401-5490</u>						becomes s1 ca		3	-4
			intbd sh airly hd			c gy, slty, p	<u> </u>		
	ļ	 					·		
5490-5530	Sits	t as abv	and sh (10	*) as ab	ıv.	· · · · · · · · · · · · · · · · · · ·		4	-7
			<u>'</u>	÷					
									
-	<u> </u>						l	<u> </u>	
		,			··· _,	-			· · · · · · · · · · · · · · · · ·
	1	· · · · - · - · - · ·			<u>.</u>				
	1								
•	<u> </u>								
	<u></u>				·				
									
				_		····			
GAS OCCURRENCE				· 					
	Total Gas	Cuttings Gas	Backgrou Un		i	CHROMATOG			1 -
INTERVAL	Units	Units	Before	After	c ₁	C ₂	C ₃	C ₄	C ₅
5420	160	150	70	70		-	<u> </u>		-
	1 1			-		+		<u> </u>	
	J	· · · · · · · · · · · · · · · · · · ·	<u> </u>	<u> </u>	!	<u>l i</u>		1	
Ditch Gas (Units):		20.40		. 40		160		165 @ 80 @	5420
	Background.	20-40	Connec	tion 40	,	_ Ттір <u>160</u>	Peaks	80 6	5430'
Mod: Wt. 10.3	Vic 43	w.t. 9	.4 mb .8	cc (Oil	0 %.0	12 33000 Temp.	78 or	in 92	0F 51H
MICH.	·					. 7			- 1. 001
Data Unit:									
Depth	•		Shale Density			c Exponent	1 1	Pore Pressur	•
5400-5	450		2.47			1.63		-	
5450-5		 ,	2.46			1.72			·
5500-5	220		2.48			1.83			
					·				
						· · · · · · · · · · · · · · · · · · ·	<u> </u>		
Dispatched Samples:									
Туре		 1	Inter	val	1	No. of Boxes	γ-	Set N	0.
Washed & Dried Di	tch								
Unwashed Ditch (F Unwashed Ditch (U					-				
GeoChem (canned									·

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TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

ELL	KUYANAK	#1		Date_	<u> 3/17/81 </u>	Time	0600		
		Previous De							
		<u> </u>							
		Muđ.							
ITHOLOGIC DES	CRIPTION	-		. 10	6 C	la Ossalian	Cood		
nterval Reported	5530-564	5 ún. @5649	Sampling Int	etasi — To	іт. Бап	ipie Quanty.			
~ B ••••••									
Interval	Interval Description							Avg, Drill Rate min./ft.	
5530-5600	Sltst, m lt gy, w/ mica, sl calc in pt, v sparse pyr, occ						7-10		
	weak	lams, mod hd;	sh (10-20%)	_m to no:	<u>stly dk ov. mi</u>		 		
	slty,	in pt splty,	fairly hd.	bri.					
5600-5630	Sltst	as abv, 35-45	i∜ sh as abv				6-7		
ECON ECAE	Sltst as abv. 70% sh as abv						8-10		
5630-5645	SILSL	_ as apv. 70* s	11. 23 abv						
	ļ	.		-	 .		 		
							 		
					-		 		
		<u></u>					-		
	_						 		
GAS OCCURREN	accienows	(NONE)	· · ·						
OWS OCCORRED	102/3/10113	•	Sackground Gas		CHROMATOGE	карн (ррм)		
	Total	Cuttings B							
· · · · · · · · · · · · · · · · · · ·	Gas	Gas	Units	C ₁	C ₂	C ₃	C4	C ₅	
INTERVAL	Gas	Gas	Units	C ₁	C ₂	C3	C4	C ₅	
· · · · · · · · · · · · · · · · · · ·	Gas	Gas	Units	C ₁	C ₂	C ₃	C4	C ₅	
· · · · · · · · · · · · · · · · · · ·	Gas	Gas	Units	C ₁	C ₂	C ₃	C4	C ₅	
	Gas	Gas	Units	C ₁	C ₂	C3	C4	C ₅	
	Gas	Gas	Units	C ₁	C ₂	C ₃	C4	C ₅	
	Gas	Gas	Units	C ₁	C ₂	C3	C4	C ₅	
	Gas Units	Gas Units Be	Units fore After					C ₅	
INTERVAL Ditch Gas (Units):	Gas Units	Gas Units Be	Units fore After Connection	_	Trip	Peak	3 -		
INTERVAL Ditch Gas (Units):	Gas Units	Gas Units Be	Units fore After Connection	_	Trip	Peak	3 -		
Ditch Gas (Units):	Gas Units	Gas Units Be	Units fore After Connection	_	Trip	Peak	3 -		
INTERVAL Ditch Gas (Units):	Gas Units	Gas Units Be	Units fore After Connection	_	Trip	Peak	3 -		
Ditch Gas (Units):	Gas Units Background	Gas Units Be	Units fore After Connection		Trip	Peak	in92	_oF. out	
Ditch Gas (Units): Mud: Wt16 Data Unit: Depth 5550-5600	Gas Units Background	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil lensity		Trip	Peak	s in92	_oF. out	
Ditch Gas (Units): Mud: Wt. 16 Data Unit:	Gas Units Background	Gas Units Be	Units fore After Connection 1 8.0 cc Oil lensity		Trip	Peak	in92	_oF. out	
Ditch Gas (Units): Mud: Wt16 Data Unit: Depth 5550-5600	Gas Units Background	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil lensity		Trip	Peak	in92	_oF. out	
Ditch Gas (Units): Mud: Wt16 Data Unit: Depth 5550-5600	Gas Units Background	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil lensity		Trip	Peak	in92	_oF. out	
Ditch Gas (Units): Mud: Wt. 16 Data Unit: Depth 5550-5600 5600-5649	Gas Units Background C.5 Vis44	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil lensity		Trip	Peak	in92	_oF. out	
Ditch Gas (Units): Mud: Wt10 Data Unit: Depth 5550-5600	Gas Units Background C.5 Vis44	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil lensity		Trip	Peak	in92	_oF. out	
Ditch Gas (Units): Mud: Wt. 16 Data Unit: Depth 5550-5600 5600-5649 Dispatched Sampl	Gas Units Background C.5 Vis44	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil lensity		Trip	Peak	in92	_oF, out	
Ditch Gas (Units): Mud: Wt. 16 Data Unit: Depth 5550-5600 5600-5649 Dispatched Sampl	Gas Units Background O.5 Vis 44	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil ensity 48		Trip	Peak	in . 92	_oF, out	
Ditch Gas (Units): Mud: Wt. 10 Data Unit: Depth 5550-5600 5600-5649 Dispatched Sampl Washed & Dried Unwashed Ditch	Background D. 5 Vis 44 Ditch h (Palco)	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil ensity 48		Trip	Peak	in . 92	_oF, out	
Ditch Gas (Units): Mud: Wt. 16 Data Unit: Depth 5550-5600 5600-5649 Dispatched Sampl	Background D. 5 Vis 44 Ditch h (Palco) h (USGS)	Gas Units Be 10-20 W.I. 15.4 ph Shale D	Units fore After Connection 1 8.0 cc Oil ensity 48		Trip	Peak	in . 92	_oF, out	



Geologist _____ BILL REYNOLDS

TETRA TECH, INC. U. S. G£OLOGICAL SURVEY/ONPRA

WELL	. к	UYANAK #1			Date_	3/18/81	Time	0600	
Present Depth	5736'	Рте	vious Depth _	56491		Footage 24 H	s. <u>871</u>		
Formation(s)	Kinqak			т	op 507	73 *			
Present Activity:	Drilling								
LITHOLOGIC DES									
Interval Reported _ Lag Time: 48		730 min, @	San	mpling Interv ft.	/al10	ft. San	nple Quality_	Good	
5				_					
Interval	1			Description			ı		ill Rate n./ft.
5645-5730						y, fairly hd,		7-	9
		w/ tr pyr ly hd.		st (0-20%) <u>, lt m</u>	gy.,mica. arc			
									•
									
	<u> </u>					=			
			·						
			<u>-</u>						
									<u>-</u>
	.								
	···			· · · · · · · · · · · · · · · · · · ·				l:	
GAS OCCURREN		(NONE)							
	Total Gas	Cuttings Gas	Backgrou Uni	ts		CHROMATOGR		T 6	
INTERVAL	Units 1	Units	Before	After	C ₁	'C ₂	С3	C ₄	C ₅
								ļ	ļ <u>-</u>
								 	-
					-				ļ
		<u>:</u>	•			<u> </u>			<u> </u>
Ditch Gas (Units):	Maralan and A	16 20	0			Trip130	D. 1.	_	
	Background	13-20	Connect	110n		InpLov	Peaks		
Mud: Wt. 10.	2Vis41	W.L. <u>15-8</u>	ph 8.0	_ cc Oil~	% C1-	2 32000 Temp	74o _{F.}	in 94	oF. out
					,	•			
Data Unit:									
Depth		S	hale Density	··	Do	Exponent	[Pore Pressure	
5650-5700			2,47			1.80			
5700-5725			2.47			1.75			
_									
						<u></u>	<u> </u>		
Dispatched Sample	s:			•					
Ту	pe	 	Interv		 -	No. of Boxes	 	Set No	
Washed & Dried	Ditch					DOALS		500 300	
Unwashed Ditch Unwashed Ditch			. 						<u> </u>
GeoChem (canno									
Cores		No.					1		



ologist . _ ___BILL REYNOLDS

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

<u> :LL</u>	KUYANAK	#1			Date	3/19/81	Time	0600	
sent Depth	5867*	Pre	vious Depth _	57361		Footage 2	4 Hrs131	1	
rmation(s)	Kingak				Гор	50731			
sent Activity:									
_						•	· · · · · · · · · · · · · · · · · · ·		
THOLOGIC DESC		950			. 1	ID 6.		Good	
erval Reportedg Time:4	6 .1	min. @	5850S	mpling Inter ft.	val	It.	Sample Quality_		
•									
Interval	4	_		Description			1	Avg. Dr. mir	ill Rate 1./ft.
<u>5730-5750</u>						cromica, sl		8-	.9
	glau	<u>y, fairly</u> , fairly h	<u>hd, bri,</u> d. mica	tr pyr; a	ind slts	st, m lt qv,	w/ tr		_
									<u> </u>
5750-5800) Sh (50-80%) as	abv and	sltst as	abv			6-	-8
5800-5850	Slts	t as abv a	nd sh (25	-40%) as	abv			8-	10
				<u> </u>		·			
		_							
								<u></u>	
	1								
		<u> </u>					•		
			 .				- .		
AS OCCURRENCE	CE/SHOWS	(NONE)					- ·		
ns occorren	Total	Cuttings	Backgro	und Gas		CHROMATO	GRAPH (PPM)		
INTERVAL	Gas Units	Gas Units	Un Before	its Aíter		C2	C ₃	C ₄	C ₅
		1	Deloie	- Antel	-			<u> </u>	
		-		.				<u> </u>	
	+ +		·	<u> </u>		+			
	+ +			-				 	-
		<u>, </u>		<u></u>			<u> </u>	J	<u>i</u>
ch Gas (Units).	Paskeround	20-25	Canana			_ Trip10	D. 1.	_	
	Dackground .	20 23	Connec	DOII		_ 111p 20	reaks		
tud: Wt. 10.	6 Vis 39	W.L. 20.4	ph 8.0	_ cc Oil	2 <u> </u>	1 ₂ 35000 Tem	p. 85 of.	in <u>83</u>	°F. out
_			•				•		
ata Unit:									
Depth	1	S	nale Density			c Exponent		Pore Pressure	
5700-5750			2.47			1,76		-	
<u>5750~5800</u>			2.47			1.69			
5800~5850	1		2.46	-		1.72			-
					·- ·				
spatched Samples	<u>:</u>								
Тур	<u>. </u>		Inter	val	1	No. of Box	<u> </u>	Set No	
Nashed & Oried D	itch		11.01			110. 61 80%		300 140	
Inweshed Ditch (Jawashed Ditch (
GeoChem cannot		+		 	-+				
Cores		No.							



Geologist BILL REYNOLDS

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

WELL	KUYANAK #	1		_ Date	3/20/81	Time	0600	
Present Depth	59801	Previous Depth	5867		Footage 24 Hrs.	113		
Formation(s)	Kingak		То	p <u>507</u>	31			
Present Activity:	Breaking	in bit #13.	···					
LITHOLOGIC DESC	RIPTION							
		30 Sz in. @ 5900	empling Interval	110_	ft. Samp	le Quality_	FAIR	
Interval	1		Description			1	Avg. Dri min	ll Rate i./ft.
5850-5980		(30-90%), 1t m cy					B-10	
	in mn	ams, mod hd; sh, m pt sft & fis, mo	stly hd & l	brit &	in mnr pt splt	у,		
	tr pyr		- - -					<u> </u>
								_
	 -							
	 			. <u></u> .				
	1							
				<u>.</u>				
			·					
GAS OCCURRENC	E/SHOWS	(NONE)	·					
	Total Gas	Cuttings Backgro Gas Un			CHROMATOGRA			
INTERVAL	Units	Units Before	After	C ₁	C ₂	С3	C ₄	C ₅
	<u> </u>							
		· 						
•	1 1		<u>i.</u>		<u> </u>			<u> </u>
Ditch Gas (Units):	Background	20-25 Connec	tion		Trip -	Peaks		
Mud: Wt10.5	5_ Vis <u>39</u>	W.L. 22.8 ph 8-0	cc Oil0	% C1 ₂	2 33000 Temp. 7	9oF.	in <u>90</u> 0	F, out
Data Unit:								
Depth		Shale Density		Dc	Exponent	P	ore Pressure	
5900~5950		2.47			1.72			
Dispatched Samples:								
Турс		Inter	val		Na. of Boxes		Set No.	
Washed & Dried Di Unwashed Ditch (P		 						
Unwashed Ditch (U	JSGS)							
GeoChem (canned Cores	<u>, </u>	No.						i
	 -	· · · · · · · · · · · · · · · · · · ·			_ · · ·			



Cores

No.

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

WELL	KUYANAK #1	<u> </u>		_ Date _ 3	/21/81	Time	0600	
Present Depth	6152'	Prev	ious Depth5980'		Footage 24 Hr	s	172'	
Formation(s)	Kingak		Т	P5	i073'			
Present Activity: _	Tripping f	or new bit	<u> </u>					
LITHOLOGIC DES	SCRIPTION							
Interval Reported Lag Time: 37	5980-615	50 nin. @	Sampling Intervi	i <u>10</u>	ft, Sam	ple Quality	, Fair	.
Interval			Description				Avg. Dril	
5980-6000	Sh.		a, slty, fairly hd	, and sh	, dk qy, sl s	ilty,		0 _
	mic	. splty.	fairly hd & brit; a	and 35-4!	5% sltst, m l	t gy,	Ţ	
		sft to mo	, occ becoming sl o	calc, fa	irly cln to a	ırg,	-	<u>-</u>
6000-6150			0% sh as abv, w/ to	rglau i	n bottom 40';		4-6	5
	1	10 00 0 DI		·				
							1	
					<u></u>			
		·,			<u></u>	•	+	
							<u></u>	
			·			•		
							+	
							+	
CAC OCCUPATION	NCE/CUOIVE						_1	
GAS OCCURRE	Total	Cuttings	Background Gas		CHROMATOGR	APH (PP)	4)	
INTERVAL	Gas Units	Gas Units	Units Before After	C ₁	C ₂	C ₃	C ₄	C ₅
INTERVAL	. 011112		Desore / mer	-				
		· · · · · ·	1	-	-		 	
								
					<u>.</u>			<u> </u>
Ditch Gas (Units):		25 25	Connection		m. 120	_	. -	
	Background	23-33	Connection		Тир	Pca	ks	
W. 1	0.4 Vie 41	7 wr 9.0	0 ph 8.0 cc Oil C). %.Cla	35000 Temp	85 or	in 87	°F. out
Mud: Wt	,,,							
Data Unit:								
1 75			hale Density	Do.	Exponent	····	Done Brassiles	
Depti	n 0-6050		2.44		1.87	 	Pore Pressure	
	0-6100		2.44		1.83		-	
610	0-6150	<u> </u>	2.46	<u> </u>	1.86	 		
						<u> </u>		
Dispatched Samp	les:							
T	ype		Interval		No. of Boxes		Set No	
Washed & Dried								
Unwashed Ditc		- 		- -				
GeoChem (can				- +-		-		



WELL	KUYANAK #	1	· · <u></u>		Date_	3/22/81	Time	0600	
Present Depth									
Formation(s)				т	ор				
Present Activity:	Coring								· · · ·
LITHOLOGIC DES									
Interval Reported Lag Time:			Sa	mpling Interv	/ai10	n. s	Sample Quality .	Fair	
Lag Time:	38	nin. @	6200	ft,					
Interval	1			Description				Avg. Dr.	ill Rate n./ft.
6150-6198						micromica,		5-	8
						%-70% sltst. alc, fairly			
6100 6000		<u>-</u>							
6198-6203		sh as abv	2-	·3					
			sft, tt, 1						
			 						
	<u> </u>							1	
			<u> </u>					 	
	·							<u> </u>	
		•					-	 	
	<u> </u>		····.						
	1							 	
	į							1	
GAS OCCURREN	CE SHOWS	(NONE)			 			1	
	Total	Cuttings		und Gas		CHROMATO	GRAPH (PPM)	 	
INTERVAL	Gas Units	Gas Units	Un Before		c ₁	C ₂	C ₃	C ₄	C ₅
				<u> </u>					<u> </u>
				<u> </u>				1	
				<u>.</u>		ļ			
				<u> </u>				1	+
]						
Ditch Gas (Units):									
	Background	15-25	Connec	tion		. Тлір <u>95-80</u>	Peaks	i	
Wr 10	.4 Vs. 39	12 זע	.8 mh 8.	0 cc Oil	0 % 0	1 ₂ 31000 Temp	n 80 or	in 86	0E au
Mud: Wt. 10	<u> </u>		p"		~ ~ ·	17	r 1.	п	. 7. 001
Data Unit:									
Depth	1		Shale Density		D	c Exponent		Pore Pressure	
	-6200		2.47			1.84		_	
		'							
	-								
Dispatched Sample	es:								
Ту	pe	<u> </u>	Inter	val		No. of Box	es	Set N	<u> </u>
Washed & Dried	Ditch								
Unwashed Ditch Unwashed Ditch					-+		- -		
GeoChem (canno									
Costs		No.			-	-			



WELL	KUYANAK	<u> 1</u>			Date_	3/23/81	Time0	600				
resent Depth	6254'	Pr	evious Depth _	6219'	ı	Footage 24	Hrs3	15*				
Formation(s)												
Present Activity:												
ITHOLOGIC DESC	RIPTION											
Interval Reported Lag Time:38		54	\$a	mpling Inter	va!	10ft. :	Sample Quality _	Fair				
Lag l'une:	-	min. @	6250	11.								
Interval	1			Description					ill Rate n./ft.			
6203-62361	Cor	e_#5 (cut	33'. rec 3	33')								
	620	3-6223.9	(20.91), s	ss, m lt	gy, v f	grn, slty o	rdg to	10				
	 	6203-6223.9 (20.9'), ss, m lt gy, v f grn, slty grdg to aren sltst, qtz, SA-SR, p srtd, sparsely glau w/ incr clau in places, blk carb grns & frags, ireg arg strs, occ sh frags (incls), tr to occ tiny patch pore por, in general tt w/ 3'										
	ļ	/ 31										
		airly well										
	622	ind & hd, general mot marble-like appearance 6223.9-6236' (12.1'], sh, m gy, slty w/ v slty strs, mica w/ tiny carb frags & ireg lams, lenses, and hands of sltst, fairly hd, brit										
	1											
6236-6250		Sh (85%), m gy, micromica, slty, fairly hd, tr pyr; sltst 5-6 (10%), lt-m gy, sparsely mica w/ cly cmt, fairly hd; ss										
								- 				
6250-6254	Sh	w/ occ carb frags & grns, lt cly cmt, tt. Sh (90%) as abv; ss (10%) as abv										
						·		1.4				
												
GAS OCCURRENC	E/SHOW'S	,		-								
	Total Gas	Total Cuttings Background Gas CHROMATOGRAPH (PPM)										
INTERVAL	Units	Units	Before		C ₁	C ₂	C3	C ₄	C ₅			
			 				<u> </u>					
		·				<u> </u>			 			
			<u></u>						 -			
			<u> </u>	1								
Disab Cas (III-iss)												
Ditch Gas (Units,	Background	15	Connec	tion		Trip 60	Peales	_				
<i>:</i>												
Mud: Wt. 10.	4_ Vis _43_	W.L18	.2 ph <u>7.5</u>	cc Oil	0% C1	2 32000 Temp	. <u>65</u> .of.	in <u>80</u>	.ºF. out			
Data Unit:												
Depth			Shale Density		Do	Exponent	I	ore Pressure				
6200-	6250	:	2.47		· -	1.73						
												
Dispatched Samples	<u>:</u>											
Тур	¢	Ī	Inter	val		No. of Box	es T	Sct No	D.			
Washed & Dried D	itch								·· <u>.</u>			
Unwashed Ditch (Unwashed Ditch (·									
GeoChem (canned									····			
Cores		No.										



DAILY GEOLOGICAL REPORT

ELL	KUYANAX	#1			_ Date_	3/24/81	Time	_0600	
esent Depth	63691	Pre-	vious Depth _	62541		_ Footage 24 H	lrs115'		
ormation(s)						<u></u>			
esent Activity:		ď							
ITHOLOGIC DESCR		50	•	-17 1 - 1	10		-ala Osalina	Good	
iterval Reportedag Time:40	<u>6254-63</u>	50 nin. @	Sai 6350	mpling Inter- ft.	/al <u>∓</u> ⊊	11. Sa	mple Quanty _	3000	
•									
Interval				Description			,	Avg. Dril min	ll Rate /ft.
6254-6314	Core	#5 (cut			. 1+ mv.	occ w/ grn	tinge		5.4
	from	glau, br	n-gy to m-	gy, arg	in botto	m ±α,Α', ν f	grn		
						SR, p srtd,			
	_spar	<u>se mica.</u> es. occ v	rr pyr, re calc w/ c	<u>w carb q</u> alc cmt	<u>rns, car</u> in a cov	c to sl calc	approach-		
	ing	an aren,	arg, brn l	s 0 6294	the r	est w/ cly c	mt, mod		
						<u>unidentifie</u>		 	
	scat	thro cor	<u>e: 0 6258'</u> ks & burro	<u>had 0.3</u>	<u>' blk. s</u> turbated	m. rd nod or l por ls tt t	<u>pos tos.</u> o tr por	 	
						70-86' fr &			
	from	6286-630	3', dec to			5' w/ some se		 	
6314-6320		hrp-ou to		romica.	sîtv. ni	splty, hd,	brit &	 	4.0
	SS J	(25%) as a	bv, tt to	tr por.					
<u>6320-6340</u>						gy, v f grn.			1-2
	SR-F	R. p. srtd	<u>w/ few m :</u> 'hot solve	<u>d blk st</u> ant: sh (<u>t grns,</u> 15%) as	sparsely mic	a, bit	(631)	9-39'}
6340-6350	Ss.a	s <u>abv. ab</u>	o sh	7-9					
	(409	t) <u>, hen-gy</u>	as_aby, t	r_shell	frags.	pels. tr brn	hd dol.	 	
	 			-				 	
	<u> </u>				-				
GAS OCCURRENCE				_					
	Total Gas	Cuttings Gas	Backgro Un		í ———	CHROMATOG			1 6
INTERVAL	Units	Units	Before	After	C ₁	C ₂	C ₃	C4	C ₅
6300_	160	40	40	40 50	30000 60000	1500	100 100	 -	 -
6320 6320-23	240 175	40 50	40 50	30	70000	1200	400	tr	
				<u> </u>	ļ	 		 	
	-			†	 	† †			†
			· · · · · · · · · · · · · · · · · · ·	•	•	<u> </u>			
Ditch Gas (Units).	Danlaraund	25-40	Connec	tion	_		Peaks	240 s	275
	Dackground					- 111p			
Mud: W110.3	Vis 44	W.L. 12	.8 ph 7.	0 cc Oil	0% C	12 31000 Temp.	_73o _F .	in _75	oF. out
MIGG.									
Data Unit:									
			Chala Danaites			la Evnanant		Pore Pressure	
Depth 6222			Shale Density 2.47			k Exponent	 	Lote Liezane	
6250-6300 6300-6350			2.49			1.58			
			·						
							 		
: I									
Dispatched Samples:									
Турс	<u> </u>		lnte	rval		No. of Boxe	s	Set No	D
Washed & Dried Dr	itch							··· ·	
Unwashed Ditch (I Unwashed Ditch (U							- 		```
GenChem (conned									
Cores		No.							



VELL	KUYANAK #1				Date_	3/25/81	Time	0600	
resent Depth									
formation(s)	Shubli <u>k</u>			Тор	6249	9' (tentativ	<u>e)</u>		
resent Activity:				 .					
ITHOLOGIC DESCR	RIPTION								
nterval Reported	6350-6540 min.	@	Sam 6500	ipling Interval _ft.	10_	ft. S	ample Quality	y <u>Goo</u>	od
Interval	ı		1	Description					Drill Rate nin./ft.
6350-6370	Ss,_lt	to m	gy, v_f gr	n, qtz, S	A-SR.	p_srtd.calc	: to	+	
	15-40%	calc, w sh, m	<u>/ glau, sp</u> brn-gy, mi	arse mica ca, slty,	mod h	cmt, mod hd d, splty, bz	rit, tr		
	fos,	tr 1s f	rags					 	
6370-6390	Ss, as	abv &	min ss, m	gy, arg,	slty,	tt; 90-95% s	sh, w/		
	few_fo	s frags	in sh w/	free fos	frags.			-	
6390-6430	Ss as	abv w/	occ fos in	ss; 20-4	0% sh	as abv w/ fe	ew sh		
	frags	& ls fr		(avg					
6430-6500	Sh. m	brn-gy	as abv. tr	ls frags; 10	0-40%	secti			
0430 0300	sltst,	m qy t	om brn-qy	, arg, ca	lc, sp	mica & in t	minor	 +	
	pt grd	g to ss	as abv		-	. <u>-</u>		 	
6500-6540	Ss, lt	gy, v	f grn, qtz	z, SA-SR,	abunt	glau, calc	to v	\perp	<u> </u>
	calc_s	parsely	<u>mica, w/</u>	<u>calc - ar</u>	g cmt	mod hd, t	t.w/		
	Tew.sn		10-90						<u> </u>
	 			TED. Shor	+ 20 0	Geochem cans	() at) A	SAD	
			N	U.S.	G.S.]	Labels (Attn	: Adkinso	n)	
GAS OCCURRENC				_			CD (DIL (DD)		
	Total C Gas	uttings Gas	Backgrou Uni			CHROMATO	i	C ₄	C ₅
INTERVAL	Units	Units	Before	After	_ _{C1}		C3		—————
	 -			-		1			
	 					 			
	 ·							1	
					·	<u> </u>	<u>!</u>		
	_					_ Trip			
Data Unit:									
Depth			Shale Density		İ	De Exponent		Pore Press	nie
6350-6400			2.48			1.79	<u> </u>		
6400-6450 6450-6500			2.48			1.90			
6500+6550			2.48			1.90			 -
			<u> </u>						
Dispatched Samples	<u>s:</u>								
Тур		1	Inter	val		No. of Box	ces	Set	No.
Washed & Dried I	· _				_				
Unwashed Ditch (Unwashed Ditch (+-							
GeoChem (canne		1							
Cores		No.	<u>. </u>						



Cartogist BILL REYNOLDS

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

WELL	KUYANAK	#1		Date_	3/26/81	Time	0600				
Present Depth	6665'	Previous D	epth6565'		_ Footage 24	Hrs.	100'				
Formation(s)	Shublik				6249' (ter	ntative)					
Present Activity:	Drilling			•							
LITHOLOGIC DESC	PIDTION										
		٥			10		Good				
Interval Reported Lag Time:	38	0 min. @ 6660	Sampling Inter	rval	ft. S	sample Quality	GOOU	_			
_											
Interval	1		Description				Avg. Dr	ill Rate n./ft.			
6540-6550	Ss.	lt qy to most!	<u></u>		otz A-SA	n srtd		-5			
	sì	<u>glau, v c</u> alc, t	t; & sh (10%), m brn	-gy, mica, s	slty, hd,					
CEED CECO		chips brn bioc		. /1541			 _				
6550-6560		as abv, sh (40° ro xl, aren, fo						-8			
6560-6580		red to brn-gy					7.	-9			
	ptpt	splty, hd & bri	t: & ss (40	to 15%)	as abv. cgl	w/ lag					
		grns & grnls.						·			
6580-6590		red as abv, ma	ar, gn. gn is	mostly !	nd & sil; 5	ss	7-	-9			
6590-6600		m to m dk gy,	sl dol, sil,	mica on	fresh broke	en surf,	7.	-9			
	hd_	hd									
6600-6660		m dk gy, dol v sh broken surf					(see ı	note)			
		ning, sil & hd			13 11011 401	,					
· · · · · ·	NOT		sk from 6561-	-				•			
			6650-65 drlg 2 0 7-9 min/f				 				
											
GAS OCCURRENC	E/SHOWS			···							
	Total	Cuttings Ba	ckground Gas		CHROMATO	GRAPH (PPM)					
INTERVAL	Gas Units	Gas Units Befo	Units ore After	c_1	C ₂	C ₃	C ₄	C ₅			
	T 1	Olives Ben	ALC ALC					 			
	ļ										
	+ +				•						
					•			 			
								Ţ			
No. a. a. a. a.											
Ditch Gas (Units):	Background .	10-15C	Connection		Trip75	Peaks _	_				
					-						
Mud: Wt. 10.	3 Vis 45	W.L15.2 ph_	7.0 cc Oil	_0% Cl ₂	31000 Temp	88of. i	n <u>88</u>	^O F. out			
Data Unit:											
Depth	i	Shale Der	nsity		Exponent		ore Pressure				
6550-6600		2.5	· · · · · · · · · · · · · · · · · · ·		1.85						
6600-6650		2,5			1.93						
											
					<u> </u>						
Diamaka Sec.	— ———										
Disputched Samples	-										
Тур	•		Interval	··· ·· ··· 	No. of Boxe	<u> </u>	Set No.				
Vashed & Dried D											
On cashed Ditch (-										
Cuwashed Ditch (- -				 					
Cores		No.	 ·								



Geologist PILL REYNOLDS

TETRA TECH, INC. U. S. GEOLOGICAL SURVEY/ONPRA

ELL		CUYANAK #1				3/27/81			
sent Depth	6690'	Previou	ıs Depth	66651		Footage 24 H	rs	25'	
rmation(s)	Nerwokpuk			т	op	6595			
esent Activity:			<u>.</u>	<u> </u>					
THOLOGIC DESC									
			S	anlina Interv	, ₂₁ C	oreft. San	nole Ouali	ty Good	<u></u>
nterval Reported ag Time:41	min	n. @ 6680	San	_ft.			mpre Quan	.,	
6 18//								_	
			,	Description				Avg. Dr	ill Rate n./ft.
Interval		gy, mica,			sil, h	d			-12
6660-6682									·
6682-6690	Core	#7 (Cut 8'	, rec. 7	.7'): S	h, m to	dk gy, mica,	slty	25-	-26
	to_v_	slty in pl	aces_w/_ 1	occ thn	sltst_l	am, sil, hd,	banded	 	
	<u> </u>	-90° verti	Cal.						
									- -
	 								
						 			
<u> </u>									
								<u> </u>	
<u>-</u>					 -	- · · · · · · · · · · · · · · · · · · ·			
							·		
							 .		
	 							 	_ .
									
GAS OCCURREN		Ct	Backgrou	and Can		CHROMATOG	DAPH (P	PM)	
	Total Gas	Cuttings Gas	Un	its	c ₁	C ₂	C ₃	C ₄	C ₅
INTERVAL	Units	Units	Before	After		1		-	
				 					
									
				}	 	 		-	
·				<u> </u>					
				<u> </u>	!	.!			
Ditch Gas (Units):	Background	5-10	Connec	tion	-	_ Trip	P	caks	
								00	~-
Mud: Wt. 10	<u>. 4</u> Vis <u>48</u>	_ W.L. <u>9.2</u>	_ ph	.O cc Oil	%(21 ₂ 33000 Temp.		oF, in <u>90</u>	_oF, out
Data Unit:									
Data Out.									
Depth	1	Sha	ale Density			Dc Exponent		Pare Pressu	re
6650-669	0 .		2.60			2.01		<u>-</u>	
<u> </u>					<u> </u>		- -		
									
								<u> </u>	
		-			L	<u>.</u>	1		
Dispatched Samp	les:								
			7-4		_	No. of Boxe	. т	Set 1	 No.
Washed & Dried	ype I Ditch		Inter	I V ALI		110. 01 BOX			
Unwashed Ditcl	h (Paleo)								
Unwashed Ditcl	h (USGS)		_			 _			
GeoChem (can	пец)	No.				·			



WELL	KUYANA	K #1	<u>-</u>		_ Date _	3/28/81	Time	0600	
		Pre	vious Depth _	6690'		_ Footage 24 Hrs	i	-0-	
						659 5	<u>.</u>		
Present Activity:									
LITHOLOGIC DESCR									
			Sa	mpling Interv	al	ft. Sam	ple Quality		·
Lag Time:		min. @		ft.					
								Avg. Dri	ill Rate
Interval				Description				suir.	n./ft.
	Теп	perature	log run						
			· · · · · · · · · · · · · · · · · · ·						
								 	
	<u> </u>							<u> </u>	
									
								 	
								 	
				· · · · · · · · · · · · · · · · · · ·	 	· 		 	
GAS OCCURRENCE	L/SHOWS			···			<u>.</u>	<u></u>	-
0.10 000011110	Total	Cuttings				CHROMATOGR	АРН (РРМ)	
INTERVAL	Gas Units	Gas Units			c ₁	C ₂	_C3	C ₄	C ₅
	 							┼	
	<u> </u>								$\downarrow =$
	 			1				+	+
					<u> </u>				1
	11		l .	! !		<u> </u>		<u> </u>	
Ditch Gas (Units):	Background		Connec	tion		Trip	Peak	· · · · · · · · · · · · · · · · · · ·	
								-	
Mud: Wt. 10.	3 Vis 47	W.L_10.	.0 ph 7.1	<u>0</u> cc Oil	% C1	2 33K Temp	of.	in	.oF. out
Data Unit:									
1									
Depth		:	Shale Density		Di	Exponent	 	Pore Pressure	:
	•••								
Dispatched Samples:						•,			
			Inter	rval		No. of Boxes		Set No	٥.
Washed & Drie 1 Dis Unwashed Dit 1 (P.									
Unwashed Ditch (U	SGS)								
GeoChem (cause 1) Cores	<u> </u>	No.			- +			<u> </u>	



TETRA TECH, ING.									
ELL									
esent Depth	6690'	Pro	evious Depth	6690		_ Footage 24 Hrs.			
rmation(s)				1	ор				
esent Activity:	Logging								
					•				
THOLOGIC DESCR			C		1	6 . Farmer	da Ossalia	-	
terval Reported	n	nin. @	San	ipung inter _ft.	va		ole Quant	У	
_									
Interval			1	Description				Avg. Dri min	ll Rate ./ft.
	Logo	ging Runs							
	DLL	ρ	4600 TT 4700-6686		re-run t	o surface)	- ·	-	
	1	ÆDC	4745-6686	<u> </u>		· · · ·			
	HRD BHC		4742-6682 4744-6672		re-run)				
		·							
	Prej	o to run:	Dipmeter Temp. Log						
	 		····						
	· · · · · · -								
 									
	+								
					,				
GAS OCCURRENCE	PICHOWS								
OKS OCCORRENCE	Total	Cuttings	Backgrou	nd Gas		CHROMATOGRA	APH (PP)	M)	
INTERVAL	Gas Units	Gas Units	Uni Before 1		Cı	C ₂	C ₃	C4	C ₅
	 		1						
	1		<u> </u>					<u>-</u>	
	 					· · · · · · · · · · · · · · · · · · ·		_	╁
	+	 	 						
	•			•		•			-
Ditch Gas (Units):	Background.		Connect	ion		Trip	Pea	aks	
	_					a 50K			
Mud: Wt10_3	3_Vis <u>44</u>	W.L. 10.	.8_ ph <u>7.0</u>	_ cc Oil	% C1 ₁	2 <u>32K</u> Temp	°	F. in	°F. ou
Data Unit:									
Dua Giaci									
Depth			Shale Density		Do	Exponent		Pore Pressure	
							<u>-</u>	 	
Dispatched Samples:									
Туре	<u> </u>	Τ	Interv	/al	·	No. of Boxes		Set No	<u></u>
Washed & Dried Di	tch			- -					
Unwashed Ditch (F Unwashed Ditch (C		_					-+		
GeoChem (canned									
Cores		No.							



ELL	KUYANAK	: #1				Date_	-, -, -, -, -, -		, <u>, , , , , , , , , , , , , , , , , , </u>		
sent Depth							Footage			0	
mation(s)											
ent Activity:											<u></u>
HOLOGIC DESC				C 2	molina Inte	oval	- 6	Sampl	e Onslity	_	
erval Reported		nin. @_		34	ft.		····································	Campi	o Quanty		
											rili Rate
interval	1				Description	L				1 m	in./ft.
	•	5:	F	e-ran T	emp & Di	pmeter	-			<u> </u>	
	<u></u>				L/MSFL DC		-6682			 	
				R/BHCS		4744	-6672				
			F	RD Dipm	eter	4741	-6683				-
	Top	<u>s:</u>	·	alakpa	sd. 509	0					
				<u>Gingak s</u>		8				├	
				impson Shublik	sd537 631						
	-			rgelite	655	i7				 	
	swc			0 6571		chem	Shot 1			1	
				6 6282 8 6110	Hyd		ns Rec. 1			 	
				3 @ 5622		chem					
· - · · · · · · · · · · · · · · · · · ·				8 5078			rec.)			<u> </u>	
		···		4 @ 4772	<u>r. Geo</u>	ochem					
	- 1									1	
									<u>-</u>		
	Pro	blems	w/ he	adings o	on logs.				<u> </u>		
AS OCCURREN		blems None		adings c	on logs.						
AS OCCURREN	CE/SHOWS Total		ıgs	Backgro Ui	ound Gas		CHROMA	TOGRA			
as occurren	CE/SHOWS	None Cuttin	igs i	Backgro Ui	ound Gas	c ₁	CHROMA C ₂	TOGRA	РН (РРМ С3) C ₄	C ₅
	Total Gas	None Cuttin Gas	igs i	Backgro Ui	ound Gas		1	TOGRA			C ₅
	Total Gas	None Cuttin Gas	igs i	Backgro Ui	ound Gas		1	TOGRA			C ₅
	Total Gas	None Cuttin Gas	igs i	Backgro Ui	ound Gas		1	TOGRA			C ₅
	Total Gas	None Cuttin Gas	igs i	Backgro Ui	ound Gas		1	TOGRA			C ₅
	Total Gas	None Cuttin Gas	igs i	Backgro Ui	ound Gas		1	TOGRA			Cs
INTERVAL	Total Gas Units	None Cuttin Gas Unit	igs is	Backgro Un Before	ound Gas nits After	C ₁	C ₂		C ₃	C4	
INTERVAL	Total Gas Units	None Cuttin Gas Unit	igs is	Backgro Un Before	ound Gas nits After	C ₁	C ₂		C ₃	C4	
INTERVAL	Total Gas Units None Background	None Cuttin Gas Unit	s	Backgro Un Before	ound Gas nits After	C ₁	C ₂ Trip Ca 31K		C ₃	C4	
INTERVAL	Total Gas Units None Background	None Cuttin Gas Unit	s	Backgro Un Before	ound Gas nits After	C ₁	C ₂		C ₃	C4	
itch Gas (Units):	Total Gas Units None Background	None Cuttin Gas Unit	s	Backgro Un Before	ound Gas nits After	C ₁	C ₂ Trip Ca 31K		C ₃	C4	
interval tch Gas (Units): Mud: Wt. 10	Total Gas Units None Background	None Cuttin Gas Unit	10.6	Backgro Un Before	ction	%C	C ₂ Trip Ca 31K		C ₃	C4	oF. or
INTERVAL tch Gas (Units):	Total Gas Units None Background	None Cuttin Gas Unit	10.6	Background Under Before Connection Ph. 7.	ction	%C			C ₃	C4	oF. or
interval tch Gas (Units): Mud: Wt. 10	Total Gas Units None Background	None Cuttin Gas Unit	10.6	Background Under Before Connection Ph. 7.	ction	%C			C ₃	C4	oF. or
itch Gas (Units): Mud: Wt. 10	Total Gas Units None Background	None Cuttin Gas Unit	10.6	Background Under Before Connection Ph. 7.	ction	%C			C ₃	C4	oF. or
interval tch Gas (Units): Mud: Wt. 10	Total Gas Units None Background	None Cuttin Gas Unit	10.6	Background Under Before Connection Ph. 7.	ction	%C			C ₃	C4	oF. or
interval tch Gas (Units): Mud: Wt. 10	Total Gas Units None Background	None Cuttin Gas Unit	10.6	Background Under Before Connection Ph. 7.	ction	%C			C ₃	C4	oF. or
itch Gas (Units): Mud: Wt. 10 Data Unit: Depth	Total Gas Units None Background	None Cuttin Gas Unit	10.6	Background Under Before Conne Property	ction	%C			C ₃	C4	oF. or
itch Gas (Units): Mud: Wt. 10	Total Gas Units None Background 3 Vis 44	None Cutting Gas Unit	10.6	Background Under Before Conne Density CAY.	ction	%C		emp.	C ₃	C4 In —— Pore Pressi	oF. or
itch Gas (Units): Mud: Wt. 10 Data Unit: Depth Dispatched Sample Ty Washed & Dried	Total Gas Units None Background 3 Vis 44	None Cutting Gas Unit	10.6	Background Under Before Conne Density CAY.	ction	%C	Ca_31K_Cl_251K_T	emp.	C ₃	C4 In —— Pore Pressi	OF. OI
itch Gas (Units): Mud: Wt. 10 Data Unit: Depth Dispatched Sample Ty Washed & Dried Unwashed Ditch	Total Gas Units None Background 3 Vis 44	None Cutting Gas Unit	10.6	Background Under Before Conne Density CAY.	ction	%C	Ca_31K_Cl_251K_T	emp.	C ₃	C4 In —— Pore Pressi	OF. OI
itch Gas (Units): Mud: Wt. 10 Data Unit: Depth Dispatched Sample Ty Washed & Dried	None Background 3 Vis 44 S: TO BE Ditch (Paleo) (USGS)	None Cutting Gas Unit	10.6	Background Under Before Conne Density CAY.	ction	%C	Ca_31K_Cl_251K_T	emp.	C ₃	C4 In —— Pore Pressi	OF. OI





LOGGING REPORT

WELL NAME_	KUYA	NAK TEST WELL #	h					
Date Marc	h 27-29, 1981		Driller Deg	oth <u>6690</u>				
Elevation	28 KB		Logger De	Logger Depth 6688'				
Logs Ran and Int	te <u>rvals</u>	·						
DLL/SP/G	R/MSFL	4747-6686		Birdwell_Vel	ocity Survey			
CNL/FDC/	GR/CAL	4745-6683		CST - Top Sh	ot 4772' Bottom 6571			
BHCS/GR		4744-66721			 			
HRD Dipm	meter	4741-6683'						
) - Run 1: 4755	5-6697' Rur	2: 300-6680				
Additional Logs	to Run							
None								
Zones of Interest								
Depth	Gross Thickness	Net Feet of Porosity	Lith	Porosity	Probable Fluid Content			
5092-5168	66	66	SS	19%	Water			
NO ZO	ONES OF INTERE	5T						
		<u>L.</u>						
Discussion: Walapka	sand Ø ranges	from 18-22% w	ith an aver	age of 19% and	is 100% wet			
Simpson	Sand is of lo	w porosity, 9%	-12%. Tight	& shaly, Sag Ri	iver porosities			
range fi	rom 9%-18% and	fairly low rt	valves. S	hublik porosity	is very low.			
Log Tops & Cor	relations:							
Kalakpa	Sand !	090'						
Kingak		158'						
Simpson Sag Riv		5378' 5242'	-,					
Shublik		312'						
Argilli		5559'						
Additional Evalu	uation Plans;							
				<u> </u>				
	· · · · · · · · · · · · · · · · · · ·							
								
				-				
			 -					
				Reynolds				
				ellsite Geologist				
			A.	Kane Log Analyst				