



TETRA TECH, INC.			<b>2762</b>	. 020200	NCAL MANO				
VELL	NORTH INI	GOK #1			Date_	2-12-81	Time	0600	
resent Depth	107'	Рт							
Formation(s)									
Present Activity:							·		
				··	<del></del> <u>*</u> -				
ITHOLOGIC DES									
Interval Reported _ Lag Time:		ரும்ற. @	Sar	mpling Inte	rval	ft. Sa	mple Quality	y	
_				<del></del>					
Interval				Description					nill Rate
	<u> </u>	-· ··· -	·	Description	· · · · · · · · · · · · · · · · · · ·				in./ft.
	<del></del>	<del></del>	<del></del> .		<u> </u>	· .			
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	<del> </del>	·	<del></del>						
				·					
	<del>-  </del>							1	
								<del> </del>	
		iq	QUEST:	1. 417	Tenort	and spl desc	<u> </u>		<del>-</del>
	<u> </u>		320001.	for	ns, i.e.	Daily Report	s. DST.		
<del>_</del> ·				% S <sub>1</sub>	ol Descri	ption, etc.	<i>/1</i>		
- <u>-</u>				2. Desi 3. Dry	k Lamp spl bxs	- 30"	<del>_</del> _	ļ	
					clips				
		· · · · · · · · · · · · · · · · · · ·						<del> </del>	
				· · · · · · · · · · · · · · · · · · ·					
GAS OCCURREN	CE/SHOWS	<del></del>		-				]	
	Total	Cuttings	Backgrou	nd Gas		CHROMATOG	карн (ррм	n	
INTERVAL	Gas Units	Gas Units	Unit Before 1		C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C4	C <sub>5</sub>
								· · · · ·	
	-			<del>- · · · · · · · · · · · · · · · · · · ·</del>					<del>  -</del>
							<del></del>		┪┈
·					ļ <u> </u>				1
									+-
New Condition								· · · · · · · · · · · · · · · · · · ·	
oitch Gas (Units):	Background		Connecti	on		Trip	Peak	3	
Mud: Wt	Vis	W.L	ph	. cc Oil	%Cl <sub>2</sub>	Temp	°F.	in	. <sup>0</sup> F, оц
Data Unit:									
Depth	<u> </u>	S	hale Density		Dc	Exponent		Pore Pressure	:
<del></del>			· · · · ·				<del>                                     </del>	<del></del>	
		<del></del>		<u> </u>			-		
							<u> </u>		
ispatched Samples									
	<u> </u>								
Тур			Interva	J		No. of Boxes		Set No	1.
Washed & Dried I Unwashed Ditch (		<del>-  </del>	<del></del>		!		<del></del>	<del></del>	
Linwashed Drich (	USGS-								
н област (саппа Совет	<u> </u>	1 % 6							



WELL NO.		1			_ Date_	2-13-81	_ Time	0600	
Present Depth 405									<u>-</u>
Formation(s) Nar									
Present Activity:Dri									
LITHOLOGIC DESCR									
Interval Reported Lag Time:8		in. @	San 100	npling Interv _ft.	ral 34	0 ft. San	nple Quality	FAIR	
Interval	L			Description				Avg. Dril	
150-210	Clyst	: lt gv.	sft, qumm	y, bent.	, w/thi	n lig. lenses	<del> </del>	0.2	
210-270	Ss:	wh, vf- dk gy, SA	f grn, sf , mod. w s	t, uncon	s., qtz dd w/	s, becoming l clyst: a/a	t grn -	0.2	
270-330	Pred	SS:_ a/a:	w/ intbdd	clyst:	a/a			0.4	
330-390	Pred		t qy-tan, ltst; tr <u>l</u>		st., gum	my; w/ thin s	s &	0.4	
· ·									
					<del></del>	. <u>-</u>		-	
	ļ			-					
	T			<del></del>	Request	: 1) all Samp		5,	
						2) Temp. Da		F	
	<del>  </del>				·	(HSGS)  3) Velocity			
						Plates			
GAS OCCURRENCE			<b>.</b> .				n . nv. /pp.		
	Total Gas	Cuttings Gas	Backgrou Uni	its		CHROMATOGI C <sub>2</sub>	<u>карн (РРМ</u> Сз	C4	
INTERVAL	Units	Units	Before	After	<u></u>	<del>                                     </del>		<del></del>	1-3-
									1
	<del>                                     </del>					<del> </del>			┼
	++-			<del></del>					
	-					<del> </del>			<del> </del>
<del></del>	<u> </u>	<u>J</u>	·	<u> </u>	i	<u> </u>			
						_ Trip			
Mud: Wt. 9.1  Data Unit:	Vis <u>38</u>	w. <u>l., nc</u>	ph_NC	_ cc Oil	<u>~</u> %c	1 <sub>2</sub> NC Temp.	_ <del></del> oi	F. in	.ºF. out
1	<del></del>		hala Dender	<del></del>	<del>-</del>	& Exponent	<del></del>	Pore Pressure	
Depth 200			hale Density NR			0.89		8.7	<u> </u>
300			NR			0,82		8.7	
400			NR			0.87		8.7	
							1		
Dispatched Samples:		<del></del>					_!		
Турс	·	<del></del>	Inter	val	<del></del> -	No. of Boxes		Set No	٥,
Washed & Dried Di									
Unwashed Ditch (F Unwashed Ditch (I		-							
GeoChem (canned									
Cores		No.					i		



TGOK #J				Date	<u>2-14-81                                  </u>	Time	0600	
٠.	Рте	evious Depth.	405		_ Footage 24	Hrs	874'	
ushuk				op Su	rface	_		
Drilling				•	_			
						•••		
	_							
390-126	0 min_@ 1	\$a	empling Inter	val30	ft.	Sample Quality	Fair-Go	00d
ļ	<u></u>		Description					ill Rate n./ft.
Pred	clyst, m	grnd, lt-	gy to m-c	y, sft, i	bent, carb	, in part	0.9	_
							<del></del>	
T	·					_		
		<del></del>			<del></del>			
Clys	t as above	e_w/com_li	q & mnr j	iq brn s	<u>n</u>		0.9	
							0.8	
							(0.3 to	3.5)
1	-		t, m-gy.	sft, arq	w/rare pb	ls & occ		<del>.</del>
Shel	* *******						<del> </del> -	<del></del>
1				nsolidat	ed, SA, qt	z; col	0.8	
is c	lr. wh. 1	t qy, gn	w/NSOCF				<u> </u> 	
Pred	clyst as	abv, occ	slty, w/	local st	rgs sltst	& ss as	0.9	
1								
Lith	change:	es. It nv	v f - f	grad bec	oming hd t	o w cmt	1.0	
							1 110	·
		_		XF; intb	3 w/calc s	ltst & lt		
	rg ls, tr	wh firm c	:1 <u>v</u>		<u>-</u>			· · · · · · · · · · · · · · · · · · ·
	Cuttings	Backero	and Cas		СПВОМАТО	CDADU (DDM)		
Gas	Gas	ັບກ	nits í	<u> </u>			T	
		Before	Alter				-	C <sub>5</sub>
I	<i>(</i> )117		<del></del>					┼
20	-	15	15	1800		_	-	<u> </u>
+		<u>.</u>	<del> -</del>				ļ	<u> </u>
<del>† . †</del>			<del>   </del>		· <del></del> ·-			+
			<u> </u>					
								•
Background .	15	Connec	tion No.	ne	TripNo	ne Peaks	None	
Background .	15	Connec	tion No.	ne -	TripNo	ne Peaks	None	
		•				ne Peaks		°F, out
		•						°F, out
		•						°F, out
	<u> ₩,L, n/</u>	•		n/c % C1 <sub>2</sub>	n/c Temp	o54oF.	in54	
	<u> ₩,L, n/</u>	<u>с</u> ph_n/с		n/c % C1 <sub>2</sub>		o54oF.		
	<u> ₩,L, n/</u>	c ph n/c		De 1	n/c Temp  Exponent  92  B7	o54oF.	in	
	<u> ₩,L, n/</u>	c ph n/c		Do 1	n/c Temp Exponent 92 B7	o54oF.	in	
	<u> ₩,L, n/</u>	c ph n/c		De 1	n/c Temp  Exponent  92  B7	o54oF.	in	
	<u> ₩,L, n/</u>	c ph n/c		De 1	n/c Temp  Exponent  92  B7  92  01	o54oF.	Pore Pressure  8.7  8.7  8.7  8.7	
	<u> ₩,L, n/</u>	c ph n/c		De 1	n/c Temp  Exponent  92  B7  92  01	o54oF.	Pore Pressure  8.7  8.7  8.7  8.7	
	<u> ₩,L, n/</u>	c ph n/c		De 1	n/c Temp  Exponent  92  B7  92  01	o54oF.	Pore Pressure  8.7  8.7  8.7  8.7	
	<u> ₩,L, n/</u>	c ph n/c	_ cc Oil	De 1	n/c Temp  Exponent  92  B7  92  01	54_of.	Pore Pressure  8.7  8.7  8.7  8.7	
_Vis_n/c	<u> ₩,L, n/</u>	c ph n/c	_ cc Oil	De 1	n/c Temp  Exponent  92  B7  92  01	54_of.	Pore Pressure 8.7 8.7 8.7 8.7 8.7	
_Vis_n/c	<u> ₩,L, n/</u>	c ph n/c	_ cc Oil	De 1	n/c Temp  Exponent  92  B7  92  01	54_of.	Pore Pressure 8.7 8.7 8.7 8.7 8.7	
	Pred slty f-m frag Clys ss: gy, shel show. Lith w/ca tt. gy a CSHOWS Total Gas Units indicati	Pred clyst, m slty w/local f-m grnd, p c frag plcy she  Clyst as above  Pred clyst, 1 ss; ss is lt gy, gn; SA; N shell frags.  Ss, lt gy, v is clr, wh, l  Pred clyst as abv.  Lith change; w/calc cmt, s tt, carh in p gy arg ls, tr CSHOWS Total Cuttings Gas Gas Units Units indication)	Previous Depth  ushuk  Drilling  UPTION  390-1260 S:  min. @ 1200  Pred clyst, m-grnd, lt-slty w/local thn bds sl f-m grnd, p consolidate frag plcy shells  Clyst as above w/com li  Pred clyst, lt gy, sft, ss; ss is lt gy, f-grn, gy, gn; SA; NSOCF; slts shell frags.  Ss. lt gy, v f - to f c is clr, wh, lt gy, gn  Pred clyst as abv, occ abv.  Lith change; ss, lt gy, w/calc cmt, sub ang, gt tt, carb in part w/cly gy arg ls, tr wh firm c  CSHOWS  Total Cuttings Backgro Gas Gas Ur Units Units Before	Previous Depth 405'  ushuk  Drilling  UPTION  390-1250  Sampling Intermin. @ 1200 ft.  Description  Pred clyst, m-qrnd, lt-qy to m-quild sty w/local thin bds sltst; slts f-m grnd, p consolidated w/occ sfraq plcy shells  Clyst as above w/com liq s mnr line sits sty sits frag plcy shells  Clyst as above w/com liq s mnr line sits sits frag plcy shells  Ss; ss is lt qy, f-qrn, qtzs, under gy, gn; SA: NSOCF; sltst, m-qy, shell frags.  Ss, lt qy, v f - to f grnd, p consolidated sits clr, wh, lt qy, gn w/NSOCF  Pred clyst as abv, occ slty, w/ abv.  Lith change: ss, lt qy, v f - f w/calc cmt, sub ang, qtz; col are tt, carb in part w/cly fill: NSOC gy arg ls, tr wh firm cly  CSHOWS  Total Cuttings Background Gas Gas Gas Gas Units Units Before After indication)	Previous Depth	Previous Depth 405' Footage 24  Surface  Drilling  UPTION  390-1250 Sampling Interval 30 ft.  min. @ 1200 ft.  Description  Pred clyst, m-grnd, lt-gy to m-gy, sft, bent, carb slty w/local thn bds sltst; sltst is lt gy, sft sf-m grnd, p consolidated w/occ sm pbls to 4 mm & w frag plcy shells  Clyst as above w/com lig & mnr lig brn sh  Pred clyst, lt gy, sft, gummy, bent's carb, mnr the ss; ss is lt gy, sft, arg w/rare pb shell frags.  Ss, lt gy, v f - to f grnd, p consolidated, SA, gt is clr, wh. lt gy, gn w/NSOCF  Pred clyst as abv, occ slty, w/ local strgs sltst abv.  Lith change; ss, lt gy, v f - f grnd becoming hd to w/calc cmt, sub ang, gtz; col are wh, clr, lt gy, tt, carb in part w/cly fill; NSOCF; intbd w/calc s gy arg ls, tr wh firm cly  SHOWS  Total Cuttings Background Gas CHROMATO Gas Gas Gas Units Units Before After C1 C2  Indication)	Previous Depth 405' Footage 24 Hrs.  Description  390-1260 Sampling Interval 30 ft. Sample Quality ft.  Description  Pred clyst, m-grnd, lt-gv to m-qv, sft, bent, carb, in part slty w/local thn bds sltst; sltst is lt gy, sft & se is brn, f-mgrnd, p consolidated w/occ sm pbls to 4 mm & whole and frag plcy shells  Clyst as above w/com liq & mnr liq brn sh  Pred clyst, lt gv, sft, gummy, bent's carb, mnr thn bds ss; se is lt gy, f-grn, gtzs, uncons; col are wh, clr, lt gy, gn; SA; NSOCF; sltst, m-gy, sft, arg w/rare pbls & occ shell frags.  Ss, lt gy, vf - to f grnd, p consolidated, SA, qtz; col is clr, wh, lt gy, gn w/NSOCF  Pred clyst as abv, occ slty, w/ local strgs sltst & ss as Abv.  Lith change; ss, lt gy, vf - f grnd becoming hd to w cmt w/calc cmt, sub ang, gtz; col are wh, clr, lt gy, arg ls, tr wh firm cly  CSHOWS  Total Cuttings Background Gas CHROMATOGRAPH (PPM)  Total Cuttings Background Gas CHROMATOGRAPH (PPM)	Previous Depth 405' Footage 24 Hrs. 874'  ushuk Top Surface  Drilling  UPTION  190-1260 Sampling Interval 30 ft. Sample Quality Fair-Gomin. @ 1200 ft.  Description May Description Min. Avg. Domining Interval 30 ft. Sample Quality Fair-Gomining Min. @ 1200 ft.  Description May Description Min. Avg. Domining Interval 30 ft. Sample Quality Fair-Gomining Min. @ 1200 ft.  Pred clyst, m-qrnd, lt-qy to m-qy, sft, bent, carb, in part 0.9 sity w/local thin bds sltst; sltst is lt gy, sft & ss is brn, f-m grnd, p consolidated w/occ sm pbls to 4 mm & whole and fræq plcy shells  Clyst as above w/com liq & mnr liq brn sh 0.9  Pred clyst. lt gy, sft, gummy, bent's carb, mnr thin bds ss; ss is lt gy, f-grn, gtzs, uncons; col. are wh, clr. lt (0.3 to gy, gn; Sh; NSOCF; sltst, m-gy, sft, arg w/rare pbls & occ shell frags.  Ss, lt gy, v f - to f grnd, p consolidated, Sh, qtz; col 0.8 is clr, wh, lt gy, gn w/RSOCF  Pred clyst as abv, occ slty, w/ local strgs sltst & ss as 0.9 phy.  Lith change; ss, lt gy, v f - f grnd becoming hd to w cmt w/calc cmt, sub ang, gtz; col are wh, clr. lt gy, dk gy, gn; tr. carb in part w/cly fill; NSCF; intbd w/calc sltst & lt gy arg ls, tr wh firm cly  Total Cuttings Background Gas CHROMATOGRAPH (PPM)  Gas Gas Units Units Before After C1 C2 C3 C4  Lindication)



N	D. INIGOR	<u>#1</u>			Date_	2/14/81	Time	0600	
nt Depth	<u> </u>	Prev	ious Depth_			_ Footage 24 i	trs	<u>.</u>	
ıtion(s)				т	ор	<b></b> -			
t Activity:									
OLOGIC DESCR									
			c.	moline Inter	<b>1</b>	f+ 5:	mole Ouglity		
ы керопев ime:		nin. @		ft.		ft. Sa	ample Quanty.		
									N.D.
Interval				Description				Avg. Dri mîn	ш Каte i./ft.
1170-1260	Pred	sltst, lt	gy, m he		calc in	part; sft no	n-calc.	1.0	)
	w/mii	n <u>ssas</u> ab	v_&_sh1	t gy, sfi	t, sl sl	ty, carb.	<u> </u>		
						<u></u>			
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		····· · · · ·				···			
	<u> </u>					<u> </u>			
	ļ								
	<u> </u>				···				
	<del> </del>		•		REQUE	ST: Dry Dit		<u> </u>	
	<u> </u>					boxes Card ta	ble w/har	3	
•			· · <del>-</del> ·				·		
	<u> </u>							<del>                                     </del>	
								1	
OCCURRENCE		C w'	D1			CUPOLLATO(	n 4 571 /5584		
	Total Gas	Cuttings Gas	Ù	ound Gas nits		CHROMATOC	C3	, C4	c <sub>5</sub>
INTERVAL	Units	Units	Before	After	C <sub>1</sub>	<del> </del>		<del>  -,</del>	1
	1					1		1	
				-		<del> </del>			<del> </del>
	<del></del>			-		1		<del>- </del>	1
	·					<u> </u>			<u> </u>
Gas (Units):	Background			ction		Trip	Peak	s	
<u>ı:</u> Wt	Vis	W.I	ph	ec Oil	% C)	2 Temp	of.	in	°F. out
unit:									
Depth		S	hale Density	<u> </u>	D	c Exponent		Pore Pressure	:
					·				<del></del>
<del></del> _									
					-				
stched Samples:									
atched Samples:			Înte	:rval		No. of Boxe	:s	Set N	o
ished & Dried Di	tch		Inte	rval		No. of Boxe	:5	Set N	o
Туре	tch Paleo)		Inte	:rval		No. of Boxe	25	Set N	0.



# DAILY GEOLOGICAL REPORT

LL NO	. INIGOK	_#1			Dat	e <u>2/15/81</u>	Time	06.00	
sent Depth19	1971		Previous Depth	127	9'	Footage 2	IUIE	23.04	
mation(s)Na	nushuk		- <del></del>				24 rus	718.	
sent Activity:	Presently				10P				
HOLOGIC DESC						<del>-</del> -			
rval Reported	1260-	1980		Sampline In		30 -			
Time:54		min. @	2000	ft.	iervaj	30ft.	Sample Quality	<u>Fair</u>	to Good
Interval	1			Description			-	Avg. D	rill Rate
1260-1380	Pred	sltst, 1	t gy, m-hd	, calc.	carb in	tbd w/clyst			in./ft.
			<u> </u>	ss. lt d	TY. f - c	rn, hd, arq.	, m-qrn, . SA, calc	0.9 (0.4 -	
		tt, NSOC	F						<u> </u>
1380-1440	Pred	clyst, 1	t gy to m	- gy, fi	rm to sf	t, sl slty,	carb	<del></del>	
		DUS SIT	<u>st as</u> abov	e & ss a	ıs above,	occ whole s	hells &	0.9	
	sneir	( <u>Plcy)</u>	frags						
1440-1500	Sltst	. lt gy.	firm, car	b, sl mi	c, w/int	bd ss, ss is	1t ov	1.3	
	<u> </u>	f grn.	hd. calc.	a <u>rg, t</u> t,	NSOCF			1.3	
1500-1590	Clyst	cream,	firm, sl	carb.					
1590-1650	<del></del>							0.7	
	to hr	n, firm.	cream to I	<u>t gy, fi</u> n	IM, occ	slty, w/min	gy	0.5	
1650 1050	<del> </del>							(0.2 to	0.9
1650-1860	highly	iltst. l	t gy. firm	arg: s	s, lt qy	, v <u>f</u> - <u>f</u> q <u>r</u>	n, firm,	0.7	
						arb, in pt h			
	brn, f	irm, sul	o~fis, w/oc	c tr ca	le, tr p	rare she	11 frags.		
1860 -1980 SOCCURRENCE	Pred c								
S OCCURRENCE	JOHUWS				<u> </u>	above	L	0.5	
	Total Gas	Cuttings Gas	Backgro Un	und Gas	<del></del>	CHROMATO	GRAPH (PPM)		
INTERVAL	Units	Units	Before	Ls After	$c_1$	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
1920	45	NC	10	10	4000				
					<del> </del>	<del>                                     </del>			
	<u> </u>				<u> </u>	<del></del>			
	<del>-</del> -							<del></del>	<del></del>
					<del>                                     </del>	<del></del>			
Gas (Units):					·	<u></u>			<del></del>
B:	ackground	10	Connect	noì	_	Trip 45 @ 13	141'	23 @ 164 45 @ 192	0
Wt. 9.6	Vis35	W.L. NC	ph _10.5	_ cc Oil	% C1 <sub>2</sub>	NC Temp.	56 oF, fr	, 5B <sub>o</sub>	F 0.11
Unit:						•	max tr	ip temp	= 55°
Depth		S	hale Density		Dc	Exponent	Pa	re Pressure	
1300 1500			NC			1.01		9.0	
1700			NC NC			.98		9.0	
1900			NC			<u>.97</u> 1.06		9.0	
	<del></del>							9.0	
1.45									
ched Samples:									
Туре		<del></del> _	Interva	<del></del>	<del></del>	No. 65	<del></del>	<b>-</b>	
ed & Dried Ditch ashed Ditch (Pale					- +	No. of Boxes		Set No.	
ished Ditch (USG		<del> </del>	120-930			1	<del></del>	-	
hem (canned)			120-930 120-1200	<del></del>	<del></del>	<del>- 1</del> -			
<u> </u>		No			<del>+-</del> -	<del></del>	<del></del> -		

1-1



## DAILY GEOLOGICAL REPORT

LL NO. II	NIGOK #1				Date	2/16/81	Time	0600	
ent Depth26									
nation(s) Na									
ent Activity:Tr	inning t	o clear w	n hole.		νρ. <u> </u>	· <b></b> -			
ent Activity:	ipping c	o cican u	p north						
HOLOGIC DESCRI	PTION								
rval Reported7	1980-260 0m	0 in. @2	600 San	npling Inter _ft.	va!3	<u>0</u> ft. S	ample Quality	NS 2340- Poor 2400-	2340 -2400 -2600
Interval			;	Description	_			Avg. Dri	ill Rate 1./ft.
1980-2040		lyst, lt		/, cream	<u>, firm, t</u>	r calc w/tl	n	0.8	
2040-2070	Lig, c	oal & lig	sh					0.6	
2070-2280	Pred s	s, tan to	wh, f to	m grn,	m - hd, c	alc cmt, S.	A, SR,	1.0	
		z: orns a	re clr. g	o, wh a	brn:_also	ss in pt.	lt gy	10.4 -	1.21_
	firm,	sl calc.	micromicae	c and cl	yst as ab	v: tr fos	wood:	<u> </u>	
	<u>tr</u> amh	er: few [	bls: tr ta	an dol		<del></del>			
2280-2340	Clyst	as abv w/	inthd ss:	ss is l	t gy, tar	.f-mgr	n, m - hd	1.2	
			OCF			•	<del></del>		
2340-2400	No san	ple (prob	ably resu	lt of cl	av member	going int	0	1.1	
	soluti	OR OF MUC	ball prev	enting r	eturn)	· · ·		<del></del>	
2400-2600	Vorv v	mor sampl	e. probah	ly for s	ame reaso	on as 2340-	2400.	1.2	
2400-2000									
	!				PEONES	ST: box 1	at Georgia	211	
					RECUES		/lids &		
						Geoche	m labels.		
AS OCCURRENCE			<b>.</b> .			CURANA ME	ומתו נות א מיצי		
	Total Gas	Cuttings Gas	Backgrow Un	its		CHROMATO	i	C4	C
INTERVAL	Units	Units		After	C <sub>1</sub>		C3		- Cs
2245	45	NC NC	8	5	7800	<del>-</del>	- "	<del>  -</del>	<del> </del>
	+ -+			<del> </del>					1
						_			<b></b>
	<del>                                     </del>		<del></del> <u></u>		<del> </del>		<u> </u>	<del></del>	<del>  -</del>
<u>-</u>	<del>   </del>			1	<del> </del>		<u> </u>		1
	<u> </u>		<u> </u>	·	<u> </u>		<u>.                                    </u>		
tch Gas (Units):		10	C	Má'	1	Trip	- Pas	.be 30 @ 20	170
	Backgroung.		Comiec	.11011	<u></u>	1117		45 @ 22	245
		10 7 N/7	10 '	5 0:1	NC øci	2 NC Tem	_ 60 or	F in 62	0F 0
<u>lud:</u> Wt. 9.6	2_ V15 <u>33</u> .	W.L	pn	cc on	70 CI	2	p		v
ata Unit:	•								
Depth			Shale Density		Dx	Exponent	<del></del>	Pore Pressur	re
2000			2.22		<del> </del>	1.0	<del></del>	9.0	
2200			2.25		<del>                                     </del>	1.05		\$ 9.0	
2600			2.25			1.09		9.0	
					1				

Interval

930-2600 930-2600 1003-0080

Type

Washed & Dried Ditch

Unwashed Ditch (Paleo)
Unwashed Ditch (USGS)
GeoChem (canned)

Cores

Set No.

2 & 3

No. of Boxes



WELL NORTH	H INIGOK #	1			_ Date_	2/17/81	Time	0600	
Present Depth2									
Formation(s)N									
resent Activity:R									
.ITHOLOGIC DESCR									
Interval Reported Lag Time:			Samp	oling Intern	ra1	ft. San	iple Quality		
Lag Time:	mi	л. @		ft.					
interval			r.	escription				Avg. Dri	ill Rate 1./ft.
Interval	Made wi	iper trip a			to run	logging tool	 ;	1	
		an okav.							
	Logging	3: Run #1	- DIL/SFI	J/SP/GR	2592-	27 logged into	erval	<u> </u>	
		70- 42	- Running	. TC/DU	C (CP				
		Run #2_	- Kuiming	, полони	.5/GR				
	<u> </u>		<u> </u>					<del> </del>	
	Drille	s TD: 2598 rs TD: 2600							
						due to poor h	ole		··
	<u> </u>	conditions.						1	
	<u>-</u>							<del> </del>	
	<del> </del>				· 			<del> </del> -	
GAS OCCURRENCE	E/SHOWS		<del>-</del>					_1	
	Total Gas	Cuttings Gas	Background Units			CHROMATOGE		1	<u> </u>
INTERVAL	Units	Units	Before	After	Cl	. C <sub>2</sub>	С3	C4	C <sub>5</sub>
	<del>                                     </del>							<del></del>	<del></del>
				·· <u>-</u> "		<del>                                     </del>			
					· · · · · · · · · · · · · · · · · · ·	***************************************			
Ditch Gas (Units):	Background		Connectio	on		Trip	Peak	g	
. •						_	0.0		Or .
Mud: Wt	Vis	_ W.L.	. ph	cc Oil	% C1	2Temp.	°F	. in	_ r. out
Data Unit:									-
Depth	· · · · · · · · · · · · · · · · · · ·	Shal	e Density			c Exponent	· ·	Pore Pressur	
									•
				· · · · ·		••••	1	_	
Dispatched Samples:									
Турс	·	<del></del> -	Interva	<u>.                                    </u>	I	No. of Boxes		Set N	o.
Washed & Dried D			Interva			7.0. 07 DOXCS			
Unwashed Ditch (I Unwashed Ditch (I							<del>i</del>		
GeoChen: (canned		No							



WELL NO	RTH INIGOK	_#1			Date	2-18-81	Time	0600	
Present Depth	2600	Pro	evious Depth			Footage 24	4 Hrs		
Formation(s)	NANUSHU	κ		<u> </u>	Тор	Surface.	<del> </del>		
Present Activity:	Prepari	n <del>g to run</del>	casing						
LITHOLOGIC DE	SCRIPTION								
			S:	ampling Inter	rval	ft.	Sample Quality_		
Interval Reported . Lag Time:		min. @		ft.			,		
								Ave D	rill Rate
Interval	-			Description		·			in./ft.
	Logs	Run #2	- Long :	Spaced BH B 25921-	iC_sonic	(Mis-run)	· · · · · · · · · · · · · · · · · · ·		<del>-</del>
		Run #4	- Long :	Spaced BH	IC Sonic	, 2586'-112'			. <u> </u>
		Run #5	- FDC/CI	NL/GR/Cal	iber, 2	597'-112'			
		Run #7	- Sidewa	all Cores	314-2	562. Shot 30	,		
			Recove	ered 28			··		
	Appro	ex. 200' c	lean ss in	section	w/dens	ity par of 2	20-278		
	Rt.	value on m	ost ss is	4-5 ohms	(indic	ates H <sub>2</sub> O)			
	NOTE:	Sidewal	l coring p	orogram a	ttemoted	after revi	ewing		
		poor ho	s (was pre le conditi	ions).	abandone	ed because c	of apparent		
								<del></del> -	<del></del>
			<del></del>		<del></del>			······································	
GAS OCCURRE		C-#1	ъ.,						
	Total Gas	Cuttings Gas		iits		ï	GRAPH (PPM)		
INTERVAL	Units	Units	Before	After	C <sub>1</sub>	C <sub>2</sub>	C3	C <sub>4</sub>	C <sub>5</sub>
				<u> </u>				- <del></del>	
			<u> </u>		<del> </del>	<u> </u>			<del> </del>
		ļ			<u>!</u>	<u> </u>	<u>!</u>		
Ditch Gas (Units):			_						
	Background		Соллес	tion		. Trip	Peaks .		
Mud: Wt	Vis	W.L	ph	_ cc Oil		aTemi	pof.	in	OF out
<del></del>			•	<b></b>		·			. 1. 041
Data Unit:									
Depth		S	hale Density		D	c Exponent	- Т	ore Pressure	<del></del>
					<del>-</del>			270 1 10 23 4 10	<del></del>
			·			·			
			<del></del>						
		<u> </u>							<u>-</u>
<u> </u>				<u></u>		··	<u> </u>	<del></del>	<del></del>
Dispatched Sample	<u>ts:</u>								
<u>1</u> y	'pe		Inter	V4]		No. of Box	es	Set No	s.
Washed & Dried	Ditch								
Unwashed Ditch Unwashed Ditch		<del></del>		<del></del> -		<del>.</del>			
GeoChem (cann					<del></del>	<u> </u>	<u> </u>		
Cores		<u> </u>							



VELL	NO. INIC	OK #1			Date_	2/19/81	Time	0600	
resent Depth									
ormation(s)									
resent Activity:									
ITHOLOGIC DES	CRIPTION								
nterval Reported ag Time:	·		Sar	npling Inte	rval	ft. :	Sample Quality	<i>,</i>	
ag Time:	· · · · ·	min, @	<del></del>	ft.					
Interval	-							Avg. D	rill Rate
Tittetaal	_1			Description				- mi	n./ft.
					<del></del>				
	<del></del>		·			<del></del>		<u> </u>	
									· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·						, <del></del>		<del> </del> -	
		· · · · · ·							
·	!		·				<u></u>		
<u></u> .	<u>i</u>								
	- · · · · · · · · · · · · · · · · · · ·					······································			· · · · · · · · · · · · · · · · · · ·
	<u> </u>			NEED.	Sidoval	ll Core Desc			
	<u> </u>	· · ·				CI COIE Desc	ription		
	L								
	1 -				<del></del>			+	
	1								
GAS OCCURREN	DE/SHOWS								
GAS OCCURREN	CE/SHOWS Total Gas	Cuttings Gas	Backgrou Uni			CHROMATO	GRAPH (PPM	1)	
GAS OCCURRENC	Total	Cuttings Gas Units	Backgrou Uni Before	ts	C <sub>1</sub>	CHROMATO C2	GRAPH (PPM C3	(1) C <sub>4</sub>	
·	Total Gas	Gas	Unit	ts					C <sub>5</sub>
·	Total Gas	Gas	Unit	ts			C3		C <sub>5</sub>
	Total Gas	Gas	Unit	ts					C <sub>5</sub>
·	Total Gas	Gas	Unit	ts			C3		C <sub>5</sub>
INTERVAL	Total Gas	Gas	Unit	ts			C3		C <sub>5</sub>
·	Total Gas Units	Gas Units	Unin Before	After	C <sub>1</sub>		C <sub>3</sub>	C4	C <sub>5</sub>
INTERVAL  Ditch Gas (Units):	Total Gas Units	Gas Units	Unin Before Connect	After After	C <sub>1</sub>	C <sub>2</sub>	C3	C4	
INTERVAL  Ditch Gas (Units):  Mud: Wt	Total Gas Units	Gas Units	Unin Before Connect	After After	C <sub>1</sub>	C <sub>2</sub>	C3	C4	
INTERVAL  Ditch Gas (Units):  Mud: Wt.	Total Gas Units	Gas Units	Unin Before Connect	After After	C <sub>1</sub>	C <sub>2</sub>	C3	C4	
INTERVAL  fitch Gas (Units):  Mud: Wt.	Total Gas Units	Gas Units	Unin Before Connect	After After	C <sub>1</sub>	C <sub>2</sub> Trip Temp	C3	C4	°F. out
itch Gas (Units):  Mud: Wt.	Total Gas Units	Gas Units	Connecti	After After	C <sub>1</sub>	C <sub>2</sub>	C3	C4	°F. out
INTERVAL  Ditch Gas (Units):  Mud: Wt.  Data Unit:	Total Gas Units	Gas Units	Connecti	After After	C <sub>1</sub>	C <sub>2</sub> Trip Temp	C3	C4	°F. out
INTERVAL  Ditch Gas (Units):  Mud: Wt.  Data Unit:	Total Gas Units	Gas Units	Connecting ph	After After	C <sub>1</sub>	C <sub>2</sub> Trip Temp	C3	C4	°F. out
INTERVAL  Ditch Gas (Units):  Mud: Wt.  Data Unit:	Total Gas Units	Gas Units	Connecting ph	After After	C <sub>1</sub>	C <sub>2</sub> Trip Temp	C3	C4	°F. out
INTERVAL  Ditch Gas (Units):  Mud: Wt.  Data Unit:  Depth	Total Gas Units  Background	Gas Units	Connecting ph	After After	C <sub>1</sub>	C <sub>2</sub> Trip Temp	C3	C4	°F. out
INTERVAL  Ditch Gas (Units):  Mud: Wt  Data Unit:  Depth	Total Gas Units  Background Vis	Gas Units	Connecting that a Density	ion	C <sub>1</sub>	C <sub>2</sub> Trip Temp  Exponent		C4  Pore Pressure	°F. out
INTERVAL  Ditch Gas (Units):  Mud: Wt.  Data Unit:	Total Gas Units  Background  Vis	Gas Units	Connecting ph	ion	C <sub>1</sub>	C <sub>2</sub> Trip Temp		C4	°F. out



WELL	NO. INI	GOK #1			_ Date_	2-20-81	Time	0600	_
Present Depth	2600'	Рте	vious Depth _	<del></del>		_ Footage 24 Hr	s		
Formation(s)									
Present Activity:	Nipplin	q up BOP.			•				
LITHOLOGIC DESC	RIPTION								
Interval Reported Lag Time:			Sar	npling Inter	/al	ft. San	ple Quality		
Lag Time:		mun. @		_11,					
Interval	<del> </del>			Description		·		Avg. Dr. mir	ill Rate n./ft.
	иоте	: Estimat	e drilling	ahead S	unday. 2	2-22-81.			····-
						<del></del> -			
						·			
								<u> </u>	
	-							1	<del>.</del>
								1	
			·						
						<u>-</u> -		1	
								ļ.,,,	
GAS OCCURRENC	Total	Cuttings	Backgrou	and Car		CHROMATOGR	A DU /DDM		
INTÉRVAL	Gas Units	Gas Units	Uni Before I	៤ [	c <sub>1</sub>	C2 C2	C <sub>3</sub>	C4	C <sub>5</sub>
	1 1		Deloie .	And					<del> </del> -
-	+ +								1
<u> </u>									
								<u> </u>	
					<u> </u>		·	ŀ	<u> </u>
Ditch Gas (Units):	Prohosound		Connect	ian		Trip	Danla		
	Dackground		Connect			11.p			
Mud: Wt	Vis	J.W	ph'	_ sc Oil	% C1	2Temp	°F.	in	oF. out
Data Unit:									
Depth		S	hale Density		Do	Exponent		Pore Pressure	:
-					· ·				
·									
		L				<del></del>	1		
Dispatched Samples	<u>::</u>								
Тур			Interv	al		No. of Baxes		Set No	o
Washed & Dried Ditch (		<del> </del>							
Unwashed Ditch (	USGS)	1			1				
ies		No.		· <u>·</u>			- · · i · ·		



ELL NO.	TNICOK	#n			Date	2-21-81	Time	0600	
resent Depth260									
ormation(s) Nai									
esent Activity:1									
THOLOGIC DÉSCR								·-·	
			Samol	ina Inters	ıa]	ft S	Sample Quality	,	
terval Reported	n	nin. @	f	t,	41	11. 3	sample Quanty		
								Avg. Dr.	ill Rate
Interval				cription				mir	n./ft.
	NOTE:	Present	estimate for on (2-21-81)	resum	ing dri	lling is thi	is	+	
		G L C L I I I I					•		
								<u> </u>	
								1	
						· · · · · · · · · · · · · · · · · · ·		1	
	<u> </u>								
				_					· <u>-</u> ·
								+	
	1								
O LC OCCUPRENCY	Dellowe.			·					
GAS OCCURRENCE	Total	Cuttings	Background	Gas		CHROMATO	GRAPH (PPN	A)	
INTERVAL	Gas Units	Gas Units	Units Before	After	c <sub>1</sub>	,C <sub>2</sub>	С3	C4	C <sub>5</sub>
	Ī Ï								-
									<u> </u>
			-		···-		<u> </u>		_
	1		<u> </u>			1	<u> </u>		
Ditch Gas (Units).	Deale-sund		Connection			Trin	Pes	kr.	
s Silver	Packalogue	- '	COMPAGE		· · · · ·				
Mud: Wt	Vis	w.i	ph	cc Oil	% C	I 2Tem	P. ——— o	î. in	_ <sup>o</sup> F. out
Data Unit:									
					`				
Depth			Shale Density		D	c Exponent		Pore Pressur	2
	<del></del>								
			·			<del></del> .			
						· · · · · · · · · · · · · · · · · · ·			
		l .					- ,—		
Dispatched Samples:									
Туре			Interval			No. of Box	ies	Set N	ю.
Washed & Emed Dr Unwashed Exter (F		<u> </u>				<u> </u>			
Unwashed Ditor (C	JSGS)	<del> </del>							
g Cherr vanned						<del></del>	······································		



## DAILY GEOLOGICAL REPORT

VELL	NO. INIGOK	#1			_ Date_	2/22/81	_ Time	0600	
resent Depth	2605'	Pres	vious Depth _	26001		_ Footage 24 H	rs	5	
ormation(s)	Nanushuk			т	ор	Surface			
resent Activity:	Buildin	g mud volu	me.						
ITHOLOGIC DE	SCRIPTION								
nterval Reported			San	npling Interv	·al	ft. Sa	mple Quality		
ag Time:	1	min. @		_ft.					
Interval	. <u> 1</u> .		<u> </u>	Description				Avg. Dri	ll Rate /ft.
						lug, suspende Leaned & mud		-	
						TEADEO & INUO			
<del></del>	<del></del>					<del></del> .		<del></del>	
								ļ	
<del></del>									· · · · · ·
		··· -	<u>-</u>						
	1		· · · · · · · · · · · · · · · · · · ·						
<del></del>	<u> </u>								
	İ								
								1	<del></del>
				•				1	
GAS OCCURR	Total	Cuttings	Backgrou	and Gas		CHROMATOG	RAPH (PPM	()	
INTERVA	Gas L Units	Gas Units	Uni Before	its j	c <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
									-
									<u> </u>
									<del> </del>
				-					
				<u>.</u>	· <u> </u>				ــــــــــــــــــــــــــــــــــــــ
Ditch Gas (Units	s): Background	l	Connec	tion		. Trip	Peal	·	<u>.</u>
- · · ·		<b>71.</b> 7	_•	02	<i>a.</i> C.	T	0=	· -	00
Mud: Wt	VIS	W.L	рл	_ & 01	70 C.I	2Temp.	r	. ш	. r. out
Data Unit:									
Dep	oth .	-	Shale Density	<del></del>	Ď	c Exponent	<del></del>	Pore Pressur	<del></del>
		<u> </u>							
	<del> · </del>	<u> </u>	,,,						
			•						·-·
Dispatched Sam	ıples:								
	Туре	<u> </u>	Inter	val		No. of Boxe	5	Set N	ó.
Washed & Dri							<u> </u>	······································	
Unwashed In	ich /USGS+							· · · · · · · · · · · · · · · · · · ·	
Co. Je					<u></u>	<u> </u>		<u></u> .	

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#### DAILY GEOLOGICAL REPORT

WELL	NO. INIGOK	#1		_	Date_	2/24/81	Time	0600	
Present Depth	4022'	Pro	vious Depth _			Footage 24		1007'	
Formation(s)	Nanushuk /	Torok			op Tore	ok Top: 3820	) (tentativ	re)	
Present Activity: _	Tripping o	ut for co	re barrel						
LITHOLOGIC DE	SCRIPTION								
Interval Reported Lag Time: 43		0 min. @	Sau Sau	mpling Inter	val	20 ft. S	Sample Quality	Pair	<del></del> <u>-</u>
Interval				Description			1	Avg. Dri min	ill Rate
3000-3140	Intb	d sltst, ltv. firm	<u>lt qy, fin</u> fri psy	m, hi ard	3; 55, 11	t gy, v f - v/local tr d	f grn	0.8	
	stn.	sl por.		<u>lyst, lt</u>		, soluble, v			
3140-3220	Pred	sltst as	abv, intb	d w/clyst	as aby			0.75	<del></del>
3220-3440	Slts	t as abv,	locally c	alc. & i	o tt grde	to ss. lt	ov. v f	).1	
	f SA-S	grn, firm R; intbd ; pyr chunk:	1+ ev	10.6-1.4	<u> </u>				
3440-3540		clyst as hd, sdy	abv, intbo	<u>d</u> w/slt <u>st</u>	as abv	, w/tr - 209	ls,	1.1	
3540-3580		ed, rthy, p sort, a	sltv. sft. arg. sl ca	. carb. i	intbd w/s	s. lt gy, s	slty-f	1.1	
3580-3820	Inth	d sequence	of sltst	. ss & mi	n clyst	as abv. no	show	1,2	
3820-3860	Redb arn	eds, rthy firm. p :	red slty	y, carb, sltst, )	intbd w/	ss. lt gy.	v f - f	1.3	
 3860-3920	<del> </del>		clyst as				<u> </u>	1.2	
3920-4022	Clys	st lt gy	& gy-brn.	sft, car	b, sl la	m, sl sol		1.2	
GAS OCCURRE	NCE/SHOWS		· · · · · · · · · · · · · · · · · · ·			<u>.</u> .		<u> </u>	
<del></del>	Total Gas	Cuttings Gas	Backgrou Un				GRAPH (PPM)	C4	C <sub>5</sub>
INTERVA	L Units	Units	Before	After	C <sub>1</sub>	C <sub>2</sub>	C3	-	<del>  _</del> -
3055-85	15		105	10 5	2500	100	100	50	
3750-60	10.								
Ditch Gas (Units	Background	55				n of heavie		15 @ 30	080'
Mud: Wt	9.5 Vis 34	W.L	12 ph 10	.5 cc Oil	<u>-</u> %C1	2 600 Tem	p. <u>82</u> of. Max Trip 1		_ <sup>O</sup> F, out
Dep	th		Shale Density		D	e Exponent		Pore Pressur	č
350	200	ļ				1.29		<del>.</del>	
360	——	<del> </del>	2.38		<u> </u>	1.32 1.35			
370		<del> </del>	2.44	<del>-:</del>	<del> </del>	1.33	<del></del>	<del></del>	
380		<del>                                     </del>	2.32	············	<u> </u>	1.26			
390		<del>                                     </del>	2.36	<del></del>	·	1.34			

# Dispatched Samples:

Type	Interval	No. of Boxes	Set No.		
Washed & Dried Ditch	120-3000	2	1 & 2 (boy #)		
Unwashed Ditch (Paleo)	2600-3400	11	4		
Unwashed Disch (USGS)	2600-3400	<u> </u>	44		
GeoChen (canned	2280-3620		7.8.1		
Cores		i	<u> </u>		



ž.

Cores

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

#### DAILY GEOLOGICAL REPORT

ELL NO	L NO. INIGOK #1						Time	0600					
esent Depth41	.851	Pre	vious Depth	40221		Footage 24 Hz	3	163'					
rmation(s)To	rok			To	op	38201							
sent Activity:Dr	illing								_				
THOLOGIC DESCRI													
	<del></del>	•	Sar	noline Interv	ai	20 ft. Sam	nple Ouality	Poor					
erval Reported4 ; Time:43	n	sin. @4	100	ft. 1	O' from	4160							
								Avg. Dri	ll Rate				
interval				Description		<u> </u>			./ft.				
4022-4036.5	Core	#1: Cut	14.5, reco	vered 14.	5, 100%	m qy clvst		9.0					
	w/coi spaci	n <u>it gy s</u> ed below	<u>1tst, lams</u> 4025'; car	<u>e top be</u> b frags,	low ang	more widely le dips appro	x	<del> </del>					
	80					- ·							
4036.5-4120	Clyst, lt gy, sft, soluble in pt, w/sltst lams & finely												
105015 1220		dis carbon  Redbed, pk-red, slty, carb, rthy, sl calc											
4120-4140	Podh												
9120-9140	NEITH.	Redhed, pk-red, slty, carb, rthy, sl calc											
		<u> </u>	<del></del>			· · · · · · · · · · · · · · · · · · ·		<del>                                     </del>					
							· · · · · · · · · · · · · · · · · · ·	1					
								<del> </del>					
	_		-			<u> </u>		<del> </del>					
								<del>-</del>					
AS OCCURRENCE	/SHOWS	(NONE)											
	Total Gas	Cuttings Gas	Backgrou Uni		<u> </u>	CHROMATOGE		T -	<u> </u>				
INTERVAL	Units	Units	Before	After	<u> </u>	C <sub>2</sub>	Сз	C <sub>4</sub>	C <sub>5</sub>				
			<u> </u>			<del> </del>		+					
					•								
	<del> </del>			<del>-  </del>		<del> </del>		<del></del>	$\vdash$				
				! !									
ch Gas (Units):													
B	lackground.	5	Connec	tion <u>10/5</u>	@ 4115	. Trip 25 @ 403	7Peak	7 @ 405	5				
	26	10	0 . 11			650 -	75 0=	. 76	0.5				
lud: Wt. 9.6	_ Vis <u>3.b.</u> .	W. <u>F10</u> .	- <u>s</u> by <u>rr</u>	_ cc Oil	≟% C1	2 650 Temp.		. in <u>-/⊻</u> ≥mp 88 @ 4					
ata Unit:						rig.	v crib ce	sap oo e 4					
					**		<del>,</del>						
Depth			Shale Density 2.36		ນ	c Exponent		Pore Pressure					
4000 4100			2.32			1.38							
4023 (core) 2.34							<del> </del>						
<del> </del>							-						
					,								
spatched Samples:				-									
· · · · · · · · · · · · · · · · · · ·							· <del></del>						
Type Washed & Dried Dite			Inter	Val.	+	No. of Boxes		Set No	) <u>.</u>				
Unwashed Ditch (Pe	traj		-										
Unwashed Ditch (Us GeoChem (canned)	SCS)	_	<del></del>				<del>-  </del>						
									<del></del>				

No. 1 (4022-4036.5)



#### DAILY GEOLOGICAL REPORT

ELL NO. INIGOK #1		1		· · · · · · · · · · · · · · · · · · ·	Date	2/26/81	Time	0600			
ent Depth5	Depth		ous Depth _	4185		_ Footage 24 H	lrs	886'			
nation(s)	Torok		<u>-</u> .		Top31	820 1					
	Tripping for										
HOLOGIC DE											
	<del></del>	5040	<b>c</b> .		ביתו ו	20' 6 6.		Fair-Poo	~		
val Reported Time:6]	4140-;	min. @	5000 Sai	mpung inter ft.	V2) 10 G	20 tft. Sa	mpie Quanty	1411 100			
Interval				Description				Avg. Drill Rate min./ft.			
4140-4720	Clys	t & sh, int				y & gy-brn,	sft -	1.2			
		, carb, w/o	cc sltst	strgs &	lams			<u> </u>			
4720-4820	Sh &	clyst as a	bv. w/inc	crease in	sltst.	sltst is lt	σy.	1.1			
		Sh & clyst as abv. w/increase in sltst, sltst is lt qy, firm, carb									
4820-5040	Dred.	Pred sh & clyst as abv w/thn ss & sltst strgs, ss is lt									
4020-3040		gy, v f grn, firm, S & P, carb, NSOCF; sltst is lt qy,									
		. carb			· · · · · · · · · · · · · · · · · · ·	•					
					<del></del>	<del></del>		+ .			
					<del></del>		<del></del>	<del> </del>			
								+			
				REO	UEST: S	everal sheet	s plastic				
						ilm base for					
						ell_log		<del> </del>			
	-					ry sample bo box Geocher		<del> </del>			
						ids.					
C CCUPPE					· · · · · · · · · · · · · · · · · · ·			1			
SOCCORRE	ENCE/SHOWS Total	Cuttings	Backgro	und Cas		CHROMATOG	рари (ррм	,			
	Gas	Gas	Un	its		C <sub>2</sub>	C <sub>3</sub>	C4	C <sub>5</sub>		
INTERVA		Units	Before 5	After 7	C <sub>1</sub>	100	tr	tr	-		
4525~50	10	<del>-</del>		<del> </del>	2000	100		+	1 -		
	<del>-   </del>				ļ	- 1		<del></del>	-		
								<del></del>			
					]]						
th Gas (Units)	:: Background	5	Connec	tionnil		Trip NA	Peak	10 @ 45	50		
	•										
ud: Wt	9.7_Vis3	<u>5 W.L. 9.B</u>	ph _11.0	_ cc Oil _1	% C1	2 600 Temp.	83 °F.	in <u>84</u>	°F. out		
· <del>-</del>											
ta Unit:											
· · · · · ·	L	T Ci	ale Deprity			Exponent	1	Pore Pressure			
Dept						1.37		. OIL LICASOIC	·		
	4500 2.31 4600 2.33					1.40					
470			2.32			1.43	-				
480		<del> </del>	2.33			1.44	-				
490: 500:			2.27			1.55					
patched Sami				,							
					· •	N C D-		Set No	<del></del>		
7	Type	1	inter	Val		No. of Boxes	<u> </u>	DEI NO	4.		

3000-4606

3400-4180

3400-4180 36.20-4380

Νc

2 (box #2)

1 (box #5)

1 (box #5) 2 (box #11 ( ±12)

ķΤ

ķ

Type

Washed & Dried Ditch Unwashed Ditch (I-4c:) Unwashed Ditch (U3GS) GeoChem (canned;

Cores



Type

Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GeoChem (canned)

Cores

ğ.,

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

#### DAILY GEOLOGICAL REPORT

WELL	NO. INIGON	#1			Date	2/27/81	Time	0600				
Present Depth	57221	Pre	vious Depth _	5071		_ Footage 24 I	Irs.	651'				
Formation(s)	Torok				op3	B201						
Present Activity:							<u></u>					
-			•						-			
LITHOLOGIC DES					_			no to				
Interval Reported _ Lag Time: 68	5040-56	60 min. @5	Sa: 650	mpling Inter ft.	val2	<u>0</u> ft. Sa	imple Quality.	Fair				
Interval		<u>_</u> _		Description				Avg. Dr mii	ill Rate n./ft.			
5040~5100	Sh.	m gy, firm	. slty, ca	rh_w/occ	lt gy s	ltst lams	. <u> </u>	1.2				
5100-5300	Sh,	lt gy - m	gy, firm,	sl slty,	w/occ l	t gy sltst s	trgs,	1.2				
		Sh, lt gy - m gy, firm, sl slty, w/occ lt gy sltst strgs, occ lt brn cast										
5300-5480	Sh.	Sh, m qy - lt qy, firm, becoming incr plty to splty,										
		Sh, m gy - It gy, firm, becoming incr plty to splty, becoming micromicac, less carbon										
5480-5500	Çe.	It ov to w	b = b4 +	· cont ni	1			1.2	<del></del>			
		Ss. lt gy to wh, m hd, w cmt, sil, arg, ang - SA, gtz, cl, wh, tan, carb, tt, NSOCF										
5500-5660	Sh.	lt av. m a	v. firm. f	fiky to n	ltv. mic	romicac, sl	· · · · · · · · · · · · · · · · · · ·	1.3				
		w/occ sl										
	<del></del>	· ···										
		<del></del> .		<del></del>				1				
		<del></del>					<del></del>					
									<del>.</del>			
GAS OCCURREN	CE/SHOWS Total	C:	Dealer	1.0								
	Gas	Cuttings Gas	Backgrou Uni	its	c. İ	CHROMATOG						
INTERVAL 5600	Units 5	Units	Before 5	<del></del>	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>			
				 	1500	tr	<u>tr</u>	<del>] -</del>	<del>  -</del> -			
			-					ļ	1			
									+			
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·							1			
			<u></u>	<u>:</u>				<u></u>	<u>, I</u>			
Ditch Gas (Units):	Daskmaund	5	Connect	lios T	41	Trip <u>27 @ 507</u>	71 n	~:1				
	packStoning		Coluieci	110tt1	**	1 mp 27 4 50	reaks					
Mud; W19	. 7_ Vis37	W.L 9.6	ph11_0	Q cc Oil _N	IC% C1 <sub>2</sub>	650 Temp.	78of.	in <u>81</u>	oF, out			
					_	-	ax trip t					
Data Unit:												
Depth		- s	hale Density		De	Exponent	T	Pore Pressure				
5100	·		2.27			. 59						
5200	<del></del>	<del> </del>	2.25			.5B	<del> </del>					
5300	·· ··· · · · · · · · · · · · · · · · ·	···-	2.30			.55 .53	<del></del>	<del></del>	<del></del>			
5400 5500	················	<del></del>	2.37	<del></del>		57	· † · · · ·		<del></del> -			
5600			2.32			.56						
				<del></del>								
Dispatched Sample	<u>:s:</u>											

Interval

4180-4900

4180-4900 4380-5340 No. of Boxes

(Box #6)

(Box #6) (Boxs #12, #13) Set No.



#### DAILY GEOLOGICAL REPORT

YETRA TECH, IN	· <b>c.</b>			5,42,	020200					
WELL	NO. I	NIGOK #	1			'Date	2/28/81	Time	0000	<del></del>
Present Depth _	6346		Prev	rious Depth	57221		_ Footage 24 l	Hrs	6241	
Formation(s)_					r	op	920' (revise	ed)		
Present Activity										
			-							
LITHOLOGIC I			_	•		. 20'-	ه م ۱۵۰	1 . 0 1/2.	, Fair	r
Interval Reports Lag Time:	ed56 .74	60-6280 Lr	րմո. @ <u>6</u>	Sал 300	npling inter _ft.	from 5	10' ft. Se 760'	ampie Quality		
Interva				1	Description				Avg. Dr. . mír	ill Rate n./ft.
5660-5	· · · · · · · · · · · · · · · · · · ·	Sh i	m my lt o			rh. flk	y - plty, mi	ca.	<del></del>	
	020			c sltst la						
			<del></del> .	1.1			-1		1.2	<del></del>
5820-5	850	Sits	t, lt qy,	m hd, arg,	, carb, 1	intod w/:	sn as abv		1.2	
5850-5	910	Pred	sh as abv	w/ intbd	sltst &	ss, ss	is lt gy - w	h, v f	1.2	
		grn.	m hd. sil	l, sl calc	qtz, c	L, wh, S	A - SR, tt,	NSOCF	<u> </u>	
5910~5	980	Ss a	s abv. tt.	occ arg,	w/ local	l dead o	il stn, no c	ut, no	1.3	
		flou	r:_intbd_v	/ sh. gy	brn. m	gy, fir	m, carb. mic	a		<del></del>
		plat	y & w/com	lse m-+ c	s grns,	SA - an	g qtz & cht	grns	<del></del>	<del></del>
5980-6	090	Pred	sh. m gy	. It gy & c	y-brn,	firm, mi	ca, carb, pl	ty -	1.3	
		splt	y. w/ <u>slt</u> :	st, intbd v	// SS, 1	t gy, v	f g, firm - rip cht, m -	m hd,	<u> </u>	<del></del>
				sl por		da' er c	LID CHC, M -	w sr.cq.		
									, ,	
6090-6	5140	Slts	<u>t, lt gy,</u> dw/sh i	arg, firm m gy, firm	sl calc . sltv.	, <u>grag 1</u> carb	n pt to ss a	is abv,	1.2	<u>-</u>
<u>6340-6</u>	5230				ty, carb	, plty,	intbd sltst	& SS	1.1	
			ibv. no sh							
6210-6	5280	Sh.	m qy, fir	m, in pt s	lty, sl	carb, no	n-calc, plty	,	1.1	
		w/oc	c sltst s	tras			<del> </del>		<del></del>	
	<del></del> †			REQUES	T: Wet	Ditch Sa	mple Boxes	(10" x 10	" × 10")	
GAS OCCUR	RRENCE/							<b>68</b> 4 DV (00)		
		Total Gas	Cuttings Gas	Backgroi Un	its		CHROMATO		T	1 Ce
INTER	VALT	Units	Units	Before		C <sub>1</sub>	C <sub>2</sub>	C3	C4 tr	C <sub>5</sub>
5700=5	57.20	- 10	NC	8	5	2000	100	100		
	i					L				
Ditch Gas (Un	nite):						1. G F	7751	10 8 5	200'
Dittil Gas (Of	Ba	ackground	3	Connec	tionnı	.1	Trip 15 @ 5	Pea	ks 10 6 37	
				e . 11 û	) on h	ic an	2 650 Temp	. 86 01	- :- 88	05 011
Mud: Wt.	9.6	Vis	W.L <u>9</u> :	<u>o</u> ph	_ cc O11		2 leimp	Max tr	ip temp.:	83
Data Unit:										
· · · · · · · · · · · · · · · · · · ·	epth.		<u> </u>	Shale Density 2.35			c Exponent	-+	Pore Pressur	<u>**                                   </u>
	5700 5800		··	2.36			1.50			
	5900	·		2.34			1.53			
	6000	<del></del>	-	2.27 2.32			1.55 1.50			
	6100. 6200			2.35			_1.45			
	6300						1.50			
Dispatched S	ampies:									
	Туре			Inter	val		No. of Box	es	Set N	io
Washed & I Unwashed				4900-57	00		1 (Box #7)			
Unwashed	Ditch (US			4900-57			1 (Box #7)		_	
GeoChem	(canned)		T	5340~58	00					<u>-</u>

No.

Cores



#### DAILY GEOLOGICAL REPORT

ELL	NO. IN	IGOK #1	· · · - · · -		Date_	3/1/81	Time	0600				
resent Depth	6470'	Pre-	vious Depth	6346		Footage :	24 Hrs	124'	<u>.</u>			
ormation(s)												
resent Activity:					-							
						<u> </u>						
ITHOLOGIC DESC			•			10 a	5 10 P	Fair				
nterval Reported ag Time:75	6200-643	min. @6	450	mpling inter ft.	Va.]	n	. Sample Quality					
Interval	,			Description				Avg. Dri	ll Rate ./ft.			
6280=6320	Pred	Lsh, m gy,	_firm, sl	carb, s	l mica,	non-calc,	in pt	1.2				
	slty	w/occ slt	st bds. 1	t qy, fir	m, in p	t grdg to	v f					
	sity	ss, tt, r	o snow									
6370-6390	Ss.	1.1										
		Ss. lt qv. v f grn. m hd. fri, arq, qtz, cl to wh w/ some trip cht. SA, tt to sl por, NSOCF, intbd w/sh & sltst as abv										
		aby										
6390-6450	Pred	Pred sh as abv w/occ sltst & ss strgs, no shows										
			<del></del>					<del> </del>				
	Cut	Core #2: 0	5454-6470	(no reco	very)							
		<del></del>			·							
<del></del>				<u>.</u>				<u>.</u>				
								<del> </del>				
								<u> </u>				
							<u> </u>	ļ <u> </u>				
GAS OCCURREN	CE/SHOWS	<del>-</del>		<u> </u>								
	Total	Cuttings	Васкуто			CHROMAT	<u>rograph (ppm</u>	)				
INTERVAL	Gas Units	Gas Units	Un Before	its   After	c <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>			
6340-50	15	NC	10	10	1800	300	500	500	400			
						<del> </del>	<del></del>	<del>                                     </del>	<u> </u>			
				1								
						<del> </del>	_	<u> </u>	1			
						<u> </u>			<u> </u>			
					6393							
Ditch Gas (Units):	Background	5	Connec	tion 20 (	6424	_ Тлір <u>_ 25_@</u>	6454 Peak	<u>15 @ 64</u>	30			
					10							
Mud: Wt. 9.	.8 V <sub>I</sub> s _34	W.L. 9.	5 ph	_ cc Ogl	% C	l <u>2 650</u> Te	mp. <u>83</u> °F. Max tri	, in <u>86</u> ip temp: 9	.ºF. out 7			
Data Unit:												
Depth			Shale Density		Ľ	2 Exponent	_	Pore Pressure	<u> </u>			
6400	0		2.33		····	1.43						

Interval

5700-6300

5700-6300 5800-6160

No.

DAME ACTIVE

Турс

Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GeoChem (canned)

Cores

Coulomes

Set No.

No. of Boxes

Box #8 Box #8 Box #15



Cores

Ceologist ....

DAVE YOUNG

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

WELL	NO, INIGO	X #1	·		Date	3/2/81	Time	0600	
Present Depth	6852'	P	revious Depth _	6470	<u></u>	Footage 2	4 Hrs	382'	
Formation(s)									
Present Activity:							···		
LITHOLOGIC D	ESCRIPTION								
		852	Sar	noling Inte	ne i	10 6	Commis Overlies		
interval Reported Lag Time:8	30	min. @	6850	_ft.	, va.	II.	Sample Quanty	_ Fall	
Interval			1	Description				Avg. Dr.	ill Rate n./ft.
6450-651	0 Pre	d sh. m. or	. lt gy, fi	<u>-</u>		w/ thn s1t	a te	1.2	<del></del>
		lams							
	NOT	E: Cut co	re #2 @ 645	4-6470	(no reco	very); drlq	rate	<u> </u>	· · · · · · · · · · · · · · · · · · ·
			min/ft.						
6510-662	0 Pre	d sh as al	v w/ intbd	1.3					
			f grn to sl			rb, SR, gtz	, cl,		
	Wn_	~_IAN, UI	trip cht. t	NSQL		·			<del></del>
6620~665		It gy, y	<u>f grn - slt</u> tan, tr de	y, firm	<u>, arq, p</u>	srtd, carb	, SA-SR	1.2	
			thd w/sh as						
6650~670	00 Pre	đ sh, m qy	, dk gy, fi	rm, car	b. non-c	alc. mica.	in pt	1.7	<del>-</del>
	slt	y, plty -	splty w/ in						
	as	abv	<u></u> .				<del></del>	<del> </del>	<del></del>
6700-673	ZOPre	d sh, lt c	y & m qy, f lty - plty,	firm, be	coming h	i mica, in	pt sub -	2.2	
	hd.	arg, in p	ot sil, in p	ot grdg	to slty	ss; & ss, 1	t gy,	<u> </u>	
GAS OCCURRE		grn - slt	y, m hd, si	il, sl a		ip cht, car (CONT. ON F			
	Total	Cuttings	Backgrou			·	GRAPH (PPM)	•	
INTERVA	Gas L Units_	Gas Units	Unit Before	ts After	$c_1$	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
6665-671	10 30	NC	25	20	2800	800	100	600	300
						<del> </del> -		<del> </del> -	<del> </del>
							<del></del>	<del> </del>	<del> </del>
<b>u</b>			1					<u> </u>	
Ditch Gas (Units)	): Background	20	Connecti	ion _35 (	average)	Trip 55 @ 6	470' Peaks	30 (666!	5-6710)
				max	conn 50	@ 6676'			
Mud: Wt.	9.8 Vis3	3 W.I. 9	.7 ph 9.0	_ cc Oil	NC % C1	2 Tem	p. <u>87 _</u> °F. max trip	in 90 temp.: 8	<sup>D</sup> F. out 5
Data Unit:							•	•	
Dept	h	-	Shale Density		D	c Exponent		Pore Pressure	
6500 6600			2.38 2.36	<del></del>		1.46			
6700			2.38			1.64			
6800		1	2.36			1.62			
	· · · -								
Dispatched Samp	oles:								
	урс		Interva	<u>d</u>		No. of Box	es	Set No	
Washed & Drie Unwashed Dita					<u></u>				
Unwashed Ditc	h (USGS)								
GeoChem (can	ned)	!					7		



ELL	NO: IN	IGOK #1			Date _	3/2/81	Time	0600					
esent Depth		Рте	vious Depth _			Footage 24	Нгз						
ormation(s)					Гор		<u>-</u>						
esent Activity:													
THOLOGIC DESCR													
			Sar	noling Inter	val	ft. 5	Sample Quality	/					
terval Reported ag Time:		nin. @		ft.									
Interval	ı			Description				Avg. Dr	ill Rate n./ft.				
	tr de	ad oil st	n. tt. no	cut, no	flour, t	tr pyr, tr 1	s						
6770-6852	Pred sh, becoming dk gy & m gy, m hd - firm, sl carb, sl												
						abv		2.3					
	REQUEST: Bundle of 10" x 10" x 10" wet												
					e boxes	ting tape							
				<u> </u>		<u>.</u>							
	-												
			·····		·								
	-												
- <del></del>		•											
	1		· ·- · · · · · · · · · · · · · · · ·					<u> </u>					
	<del> </del>												
GAS OCCURRENCE	C/SHOWS Total	Cuttings	Backero	and Car		CHROMATO	CDADU (DD)	Λ					
· · · · · · · · · · · · · · · · · · ·	Gas Gas Units				Cı	CIROMATO	C3	C4	C <sub>5</sub>				
INTERVAL	Units	Units	Delore	Aner	<del></del>		-3	-	+ *				
					ļ								
<del></del>								-	+				
	ļ <u>.</u>								1				
					<del> </del>	<u> </u>		<del></del>	+				
<del>12 ( 2000 )</del>	1 1	<u> </u>	•			•	<del></del>						
itch Gas (Units):	Background.		Connec	tion		Ттір	Pea	ks					
						-							
Mud: Wt	Vis	W.L	ph	cc Oii	% C1	2Tem	p o;	. in	.ºF. out				
Data Unit:													
Depth		3	Shale Density		D	c Exponent		Pore Pressur	-				
						·····	<del></del>						
						<u>.</u>		•					
		-	· · · · · ·			<del> </del>							
	_	·· · · · -											
Dispatched Samples:													
Туре			Inter	val		No. of Box	es	Set N	0.				
Washed & Dried Dit Unwashed Ditch (P					<u>_</u>	<u> </u>							
Unwashed Ditch (U	ISGŚ)												
GeoChem (canned) Cores		No.											
OCTOR.								<del> </del>					



Туре

Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GeoChem (canned)

Cores

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

#### DAILY GEOLOGICAL REPORT

WELL	NO. IN	IGOK #1			Date	3/3/	81	Time	0600	
Present Depth	6950'	Pre	vious Depth _	6852		Foo	tage 24 Hrs.		981	
Formation(s)Present Activity: _Dr.	(B	OTTOMSET B	EDS: TENTA	TIVE)	Тор(	3920 <b>'</b> (6830)		<del></del>		
LITHOLOGIC DESCR	-	·								
Interval Reported		920 min. @	\$ar 6850	npling Inte ft.	rval	10	ft. Samp	le Quality	Fair-Goo	d
Interval	<u> </u>		·	Description						ill Rate n./ft.
6852-6867			15', 100% com_sltst_						12.0	1
	lt.g	y, sl calc	, some slu	mp feat	ures, w	/ micro-	xbdg, lo	w	ļ <u> </u>	
			not cut,				tr blee	ding	<u> </u>	
6867-6920	Sh.	đk ov a n	gy, m hd.	w/ thm	sltst st	trgs, tr	pyr, tr		3.2	
		<del></del>								
•	<u> </u>		· · · · -						<u> </u>	
				• • • • • • • • • • • • • • • • • • • •		<del></del>			<del> </del> -	
						· · · · ·				
										<del>-</del>
<del></del>		<del></del>		<del></del> -	<del></del>			····-	<del></del>	
GAS OCCURRENCE									· <u>*</u> ·	-
	Total Gas	Cuttings Gas	Backgrou Uni			1	MATOGRA		<u> </u>	<u> </u>
INTERVAL 6880-90	Units 10	Units NC	Before 1	After 10	1200	+	00	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
	10		. 10		1200				200	200
	-			···	<del></del>	<del> </del>			<del></del>	-
						-			1	
	†				<u> </u>	<u> </u>		·		<u> </u>
Ditch Gas (Units):	Background	10	Connect	ion <u>15</u>		_ Trip_8	0 @ 6867'	Peak	None	
Mud: Wt. 9.7	Vis33	8 W.L 11	.O ph 9.0	oc Oil	NC % C	:1 <sub>2</sub> _500	Temp{}	35 of.	in <u>87</u>	.ºF. out
Data Unit:									_	
Depth		- · s	hale Density		I	Dc Expone	nt		Pore Pressure	:
6900			2.45			1.71				
				-		<del></del>				
				,					• • • • • • • • • • • • • • • • • • • •	
Dispatched Samples:										

Interval

6300-6850 1....-6850

- 6852

(6852-6867)

No. 3

Ŋ

Sct No.

No. of Boxes

2 (bxs 16 & 17)



Geologist \_\_\_ NORRIS\_REQUIST

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

## DAILY GEOLOGICAL REPORT

VELL NO. IN	IGOK #1				Date_	3/4/81	Time	0600					
resent Depth7	314'	Pre	vious Depth	6950'		Footage 24	Hrs364	t					
Formation(s)T	orok (Bo	ttomset)			Top6974	<u>. –                                     </u>							
resent Activity:T	ripping	for new bi	t										
LITHOLOGIC DESCI	RIPTION												
		314	5.	amalina lata	t 10	)'		Good					
Interval Reported Lag Time: 85		min. @	300	ft.	1 vai	II. S	ample Quality_		·				
Interval	1			Description	1			Avg. Dri . mir	ill Rate 1./ft.				
6950-6974	Sh,	dk - π qy,	w/ sltst			rs		·	3.2				
607A 6005	ļ								1.8				
6974-6985	Ss,	Ss, lt gy, v f grn; sltst, p srtd, arg, tt, 300 units gas											
6985-7080	Sh a	Sh as aby (6950-6974)											
7080-7098		Ss & sltst as aby, 80 units gas											
7080-7098	35 0												
7098-7144	Sh a	as abv (695	0-6974)						2.5				
7144-7151	Ss 8	sh as abv	, 100 uni	ts gas					2.1				
				•									
_7151-7180	Sh a	is aby (714	14-7151)	<del></del> -		<del></del>			2.5				
7180-7236	Ss.	lt gy. v f	grn to s	ltst, p	srtd, arc	1, tt, w/ sh	, dk gy,		1.8				
		ny st <u>rs,</u> d s gas <b>0</b> 71				cut on crush	, 180	-					
	1	. <del>S. O. S. M </del>	. 4.7 7.7. 11		<u> </u>		· ·						
7236-7275	Sh.	dk gy. sat	iny. w/ s	ltst, lt	qy, p si	r <u>td, arg, tt</u>	strs in sl	h	3.2				
7275-7285	Ss. a	s abv (718	30-7236).	275 unit	s qas				1.8				
7285-7314		st & sh as	abv (7236	<u>-7275)</u>					3.4				
GAS OCCURRENCE	Total	Cuttings	Backgro	und Gas		CHROMATO	'DADH (DDM)						
INTERVAL	Gas Units	Gas Units	Un Before	nits	$c_1$	c <sub>2</sub>	C3	C <sub>4</sub>					
6970-7005	1_ 300 i	NC	30	40	2800	7500	7500	5000	1500				
7225-7240	275	NC	75	100	2200	4000	5000	5000	1500				
			· · · · · · · · · · · · · · · · · · ·		<u> </u>	<del>-</del>			-				
				1	-		· · · · · · · · · · · · · · · · · · ·		<u> </u>				
•				<del> </del>									
····	. ,	· <del>-</del>		•	<u> </u>			L	<u></u>				
Ditch Gas (Units):	Background	100	Connec	tion 150	@ 7303	Тлір45	Peake	300 @ 6	980				
	<b>g</b>					••••	1000						
Mud: Wt. 10.2	Vis41	w.L <u>11</u> .	2 ph <u>9.0</u>	∟ cc Oil ⊥	% C1 <sub>3</sub>	25Ω <b>0</b> Temp.	_102of.	in <u>104</u>	F, out				
Data Unit:													
Data Oint.													
Depth		S	hale Density		Dç	Exponent	F	Pore Pressure					
7000			2.42			1.57							
7100 7200			2.44	- "		1.56 1.56			<u>-</u>				
7300			2.49			.67							
							<del> </del>		_				
<b>.</b>				· · · · · · · ·		·							
Dispatched Samples:													
Туре			Inter	val		No. of Boxes		Set No.					
Washed & Dried Dit						-							
Unwashed Ditch (Pa Unwashed Ditch (U			<del></del>		<del></del> i		<del></del>						
GeoChem (canned)			_			-							
Cores		i No			ı		1						

N 74



Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GeoChem (canned)

Cares

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

#### DAILY GEOLOGICAL REPORT

WELLN	O. INIGO	K #1			Date_	3/5/81	Time	0600	
Present Depth7	490'	Pr	revious Depth	7314'		Footage 24	Hrs	176'	
Formation(s)P									
Present Activity: _C	oring (C	ore #4) @	7490; top	core @ 74	88'				
LITHOLOGIC DESC	RIPTION								
Interval Reported Lag Time:88	7314-7	488 min. @	7450 S	ampling Interi ft.	val 10	0'ft,	Sample Qualit	y Fair	
Interval	<del>-                                    </del>			Description		<u> </u>			rill Rate in./ft.
7314-7328	Sh,	dk qy, s <u>m</u>	<u> </u>		<del></del>			2	. 3
7328-7338	Slt	st, gy, p	srtd, shy,	mica				1	. 4
7338-7471	Sh,	đk gy, sm	, w/ sltst	, gy, p s	rtd, shy	y, mica str	5 & lams	2	-2
7471-7488	Sh,	v dk brn,	sft, flky	, splty,	tr - 10	tuff, tan	to buff,	2	.6
	· · · · · · · · · · · · · · · · · · ·				<del></del> -			<del>                                     </del>	
	<del> </del>		<del></del>					<del></del>	
GAS OCCURRENCE	E/SHOWS			· · · · ·	<u> </u>			J	
	Total Gas	Cuttings Gas	Backgrou Un:	and Gas		CHROMATO	GRAPH (PPM	()	
INTERVAL	Units	Units	Before	After	c <sub>1</sub>	C <sub>2</sub>	C3	C <sub>4</sub>	C <sub>5</sub>
7320-85	250	<u> </u>	100	125	2200	400	600	500	1700
									<u> </u>
					<del></del>			ļ	-
	<del>  </del>								
						Trip 175 @ 7			
	YIS	w.L	<u>~_ ph _ 9.0</u>	_ cc Oil	% CI <sub>2</sub>	Temp.	650F.	in <u>88</u>	<sup>o</sup> F. out
Data Unit:									
Depth		S	hale Density			Ехролелі		Pore Pressure	
7400	<u> </u>		2.48		1	- 56			
						·			
		··			<del></del> -				
Dispatched Samples:				·					
Турс	·-·	<del></del>	Interv	<u></u>	<del></del> 1	No of Boxes	<del></del>	Cel No	

Interval

6850-7220

6850-7220

<u>6852-7120</u>

No. of Boxes

1 (Box #10)

1 (Box \$10)

1\_{Box\_#18}

Set No.

N-63



WELL N. INIGO	K #1			· · · · - ·	Date_	3-6-81	Time	0600	
resent Depth7706	<u>;                                    </u>	Prev	rious Depth _	7490	1	_ Footage 24	Hrs.	216'	
Formation(s) K1	NGAK SH			·	Тор	7648'			
Present Activity:	rilling								
LITHOLOGIC DESCRI	PTION								
Interval Reported	7488-76	70'	Sau	npling Inter	rval 10	ft. :	Sample Quality	y fair	<u>-</u>
Lag Time: 90	n	ໜາ. ຂ	7030	IL.					
Interval 1				Description				Avg. Dri	ill Rate 1./ft.
7488-75061	Core #	4. Cut 18'	. Rec. 18	<u> </u>	mmed. S	h, v. dk br	n, flky.	17.0	
		carb. w/m r strks.				smooth_st	rks, occ		
7506±7648 % 6.1						·		1	B
730097646 5 5.		s Ss size				ion as core	, carb,	1.0	<b>,</b>
7648-7670"	Sh. v.	dk brn gy	smooth	splty.		<del>-</del> ·· ·		3.1	1
7040-7070	ATT . A .	as pru 8)	, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	~ <u>r</u> ~-7!					
		··· ·· · · · · · · · · · · · · · · · ·	· ·					+	
				•					
	·								
				_					
						<del>-</del>		<u> </u>	
GAS OCCURRENCE					-				
	Total Gas	Cuttings Gas	Backgrou Uni	its		CHROMATO C2	GRAPH (PPI C3	C <sub>4</sub>	C <sub>5</sub>
7550-7590	Units 75 I	Units No	Before 50	After 55	C <sub>1</sub>	1200	1600	1500	600
.330 .330									
	1				<del> </del>			<u> </u>	-
				1					
			<del>-</del> · · · · · · · · · · · · · · · · · · ·	<del>!···</del>	<u> </u>		<del>                                     </del>		<del>                                     </del>
	•							<u></u>	
Ditch Gas (Units):	Background.	60	Connec	tion75		Trip140	) Pea	iks 75 @ 75	70'
Mud: Wt 10.3	Vis	W.L	2. ph. 7.0	_ cc Oil _	<u>∨</u> % C1	2 500 Tem	po	F. in <u>50</u>	oF, out
Data Unit:									
Depth	——-т	<u>_</u>	hale Density		D <sub>0</sub>	Exponent		Pore Pressure	
7500			2.46			1.62			
76001			2.33			1.50			
,			<del></del>						
Dispatched Samples:	······································			· · · · · · · · · · · · · · · · · · ·					
Туре		····•	Inter	val	<del></del>	No. of Box	(es [	Set No	<del></del>
Washed & Dried Dite									
Unwashed Ditch (Us Unwashed Ditch (Us		<del></del>					-	_	
GeoChem (cannol)									
Cores		No.						<del></del>	



## DAILY GEOLOGICAL REPORT

WELL N. INIGOK #	1:	Date3/7/81	Time 0600
Present Depth 8050	Previous Depth 770	06' Footage 24	
			rus
Present Activity: Drilling		101	<u> </u>
LITHOLOGIC DESCRIPTION	<del></del>	<u> </u>	
Interval Reported7670-80 Lag Time:98	20 Sampling _min. @ <u>8000</u> ft.	Interval 10 ft. Sa	umple Quality Good
Interval	Decorie	,	Avg. Drill Rate
7670-8020 Sh,	v dk brn. organic. sm. sr		min./ft.
			4.1
		<del></del>	
		<u> </u>	
		<u> </u>	
		No. d. Chiania	
<del></del>		<u>Need: Shipping</u> for samples -	washed
		& dryed.	
GAS OCCURRENCE/SHOWS		<del></del>	
Total Gas	Cuttings Background Gas Gas Units	CHROMATOGR	АРН (РРМ)
INTERVAL Units 7865-7890 160	Units Before After	$c_1$ $c_2$	C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>
7865-7890 160	<del> 90 110</del>	14,000 3500	4200 4500 1800
		<u> </u>	<del></del>
	<del></del>		
itch Gas (Units).	75		· · · · · · · · · · · · · · · · · · ·
Background _	Connection	Trip	Peaks 160 units @ 7870
Mud: Wt. 10.7 Vis 61	W.L. 43 ph 9.0 cc Oil	0 %0 500 - 1	0.0
Data Unit:		——— 70 C1 2 ——— Temp, <u>1</u>	o.o. of. inof. out
Depth	Shale Density		<del>-</del>
7700	2.42	Dc Exponent	Pare Pressure
	2.32	1.68	
8000	2.42	1.64	
		1.67	-
spatched Samples:			
Туре	Interval		<u> </u>
Washed & Dried Ditch	None None	No. of Boxes	Set No.
Unwashed Ditch (Paleo) Unwashed Ditch (USGS)	7220-7650	1 box	
GeoChem (canned)	7220-7650 7120-7690	l box	
Cores	No. 4 7488-7506	2 boxes	<del></del>

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## DAILY GEOLOGICAL REPORT

WELL	N. INIGO	OK #1			Date_	3/8/81	Tirne	0600	
Present Depth	80731	Pr	evious Depth _	8	1050	Footage 24	Hrs.	23	
Formation(s)	Kingak S	Sh.		<u>-</u>	Тор	7648'			
Present Activity:	Trip								
LITHOLOGIC DESC	CRIPTION								
Interval Reported Lag Time: 105	8020-8070	) .min. @		mpling Inte ft.	rval	<u>10</u> ft.	Sample Quality_	Good	<del>-</del>
Interval	1			Description	1			Avg. Dri	ill Rate n./ft.
8020-8070	Sh.	v dk brn,	organic,	sm, spli	ntery				5
				<u> </u>					
			· · · · · ·			<b></b>			
	<u> </u>		<u> </u>						
				<del></del>	<u>-</u> .				
	-			<u></u>		- <del></del> -			
	-					······································			
		<del></del> .	<del></del> _	<u>-</u> .	<del></del> .	<del></del>	_		<u> </u>
	<u> </u>	·	·						·-
GAS OCCURRENC	E/SHOWS				<del></del>				
	Total	Cuttings	Backgrou			CHROMATO	GRAPH (PPM)		
INTERVAL	Gas Units	Gas Units	Uni Before	ts After	c <sub>1</sub>	C <sub>2</sub>	С3	C <sub>4</sub>	C <sub>5</sub>
8055-8060	60		60	<u>6</u> 0	3500	2500	3500	3000	800_
						<del></del> -		<del> </del>	<u> </u>
	1		_	-					
			·				1		
Ditch Gas (Units).	Background.	60	Connect	ionN	Δ	Trip250	Peaks _	60	
									_
Mud: Wt10_	9_Vis_ <u>68</u>	W.I <u>4.5</u>	ph <u>8.5</u>	_ cc Oil	% C1;	2500 Temp	<u>106</u> °F. i	n110_0	F. out
Data Unit:									
Depth	<del></del> 1	S	hale Density	1	De	Exponent	D	re Pressure	
8000			2.46			1.67		NA NA	
·			<del>-</del>				<del> </del>		
					_				
					· · · · · · · · · · · · · · · · · · ·				
Dispatched Samples:									
Type Washed & Dried Di			Interv	<u> </u>		No. of Boxes		Set No.	
Unwashed Ditch (P	aleo)					<u> </u>	<del></del> -		
Unwashed Ditch (U GeoChem (canned)									
Cores		No.				•	<del> </del> _		

Geologist \_\_\_\_\_ NORRIS REQUIST



#### DAILY GEOLOGICAL REPORT

WELL	NO. INIGOK	#1	<u> </u>		Date	3/9/B1	Time	0600	
 Present Depth _	B286'	Pre	vious Depth _	8	0731	Footage 24 H	л	213'	
_	Kingak Sh		=						
	: Drilling				107		· <del>- · · -</del>		
-									
	DESCRIPTION								
nterval Reporte	ed <u>8070-8</u> 2 L07	230' _min. @8	Sa 1200	mpling Inte	rval	10 ft. Sar	nple Quality	Good	· <del></del>
Interva)	1 1			Description				Avg. Dri	ll Rate ./ft.
8070-81		v dk <u>brn</u> /	gy, sm, o			yr		<del></del>	0
8180-82	230 Sh,	a/a. w/ ir	ier sltstn	, lt bra	ı, f arg	. tr. bl/gn gl	au	2.	8
	Pen	etration ra	ite increa	sing to	1.8 fpm	. Samples not	up.		
		· · ·		<del>-</del> .					
							<u>.</u>	<del></del>	
						<del></del> -			-
					•				
	<del></del> -					<del>-</del>			
	<u> </u>	·· ·· · ·							
CAR OCCUPE	PENCEICHOME	<u> </u>	·	·					
GAS OCCUR	RENCE/SHOWS Total	Cuttings	Backgrou	and Gas		CHROMATOGE	APH (PPM)		
INTERV.	Gas	Gas Units	Un Before		C <sub>1</sub>		C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
8180-8:		-	70	90	10500	2600	2200	2000	1200
8205-83	230 175		90	175	20000	4500	3500	2800	1200
				-	<del> </del>	<del> </del>		<u> </u>	
				<u></u>	<u> </u>				<u> </u>
					ļ	<del>                                      </del>			
			<del></del>	!	<del>!</del>			<u> </u>	<u> </u>
Ditch Gas (Unit	(s):	175 8 82	30' 0.	18	95	_ Тпр160_		175 0 00	
	раскатопиа	175 6 02.	Connect	uon		_ InpIh(I_	Peaks		15,
Mud: Wt.	10.9 Vis 61	W.L. 4.5	9 ph 8.5	_ cc Oil	0%C	1 <sub>2</sub> 650_Temp	109 ог	in 110 c	F out
			•			2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -			1. 00.
Data Unit:									
Der	pth	S	hale Density	ı	n	c Exponent	T	Pore Pressure	$\overline{}$
	100		2.53			1.50	<u> </u>	-	
8	200	<u> </u>	2.44			1.64	ļ <u>.</u>	-	
								<del></del>	
		I			<u>_</u>		1		
rispatched San	nples:								
	Туре	<del></del>	Interv	al	<del></del>	No. of Boxes	ı	Set No.	
Washed & Dri	ied Ditch								
Unwashed Dit									
GeoChem (ca									
Cores		No.							

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Norm



WELL N	o. INIGO	K #1	· · · · · · · · · · · · · · · · · · ·		_ Date_	3/10/81	Time	0600	
Present Depth8									
Formation(s)K	ingak Sh	ale		т	ор	7648'			. •
Present Activity:	irculati	ng, prepar	ing to ru	n logs.			<u>.</u>	·—	
LITHOLOGIC DESC	RIPTION								
Interval Reported Lag Time:11	8230-8 0	478 mía. @	8478 Sa	mpling Inter	al	10 ft	. Sample Quality	Good	
Interval	ı			Description				Avg. Dri	li Rate ı./ft.
8230-8370	Slts	t, lt brn,	f, arg,	tt. w/ lt	1 m - c	rs slt	····	3.	0
8370-8410	Slts	t as abv w	/ inc sh,	v dk brn	- gy,	sm, splty		5.	0
8410-8478	Sh,	v dk brn-g	ry, sm. sp	lty		· · · · · · · · · · · · · · · · · · ·		7.	7
							<del>-</del>	<del></del>	
			<u> </u>				·	<u> </u>	
	ļ —						• .	<b></b>	
							······································	<del> </del>	
						<del></del>			
<del></del>	NOT					OCCURANCE CORRECTION		<del> </del>	
		BE	LOW. THIS	S WILL SU	PERSEDE	REPORT OF	3/10/81.		
			DITECTION	##de 3/1	1/01/				
						·	<del></del>	<del> </del>	<del></del>
GAS OCCURRENCE	L E/SHOWS			-					<u> </u>
	Total Gas	Cuttings Gas	Backgro Un			CHROMAT	OGRAPH (PPM)		
INTERVAL	Units	Units	Before	After	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
8260-8295	175	-	175	220	12000	4000	4000	3500	1000
							<b>—</b>		ļ
								<del>                                     </del>	-
				<del>                                     </del>					-
	<del></del>			·		<u> </u>		<del></del>	1
Ditch Gas (Units):	Background	100	Соплес	tion 140		_ Trip150	Peaks	275	
514 17 4	4 sp. 73	nr. 4.3	2 . 8.5	07	- «		ort trip) mp. 106 of.	. 114	
Mud: Wt 11.2	· VII	W.L	pa	_ æ оп	———76 U.	12	mp	in	Yr. out
Data Unit:									
Depth	-	S	hale Density		<u>_</u>	c Exponent		Pore Pressure	
8300 8400			2.45 2.40			1.51	-	<u>-</u>	
			£179						
·	·							<del></del>	
Dispatched Samples:									
Туре			Inter	val		No. of Bo	exes	Set No	).
Washed & Dried Di Unwashed Ditch (P									
Unwashed Ditch (L	ISGS)								
GeoChem (canned)	)	No.							
Cores		1 140-							



TETRA TEGH, ING.									
WELL	NO. INIGO	OK #1			_ Date	3/11/81	Time	0600	
Present Depth	84781	Prev	ious Depth _	8478		Footage 24	Hrs.	0	<del></del>
Formation(s)	Kingak			т	`op	76481			. •
Present Activity:	Running 1	logs.							
LITHOLOGIC DESC	RIPTION								
Interval Reported			Sar	npling Inter	val	ft.	Sample Qua	lity	
Lag Time:	·	min. @		ft.					
								Avg. Dr	II Rate
Interval	<del> </del>		<del></del>	Description		····			ı./ft.
	Trod:	Run: DII	(Short	Spacing)					
		LS	(presen	tly bein	g run)				
***	Com	ments on L							,
<del></del>	<del></del>		<u>resistivi</u> cous water				· · · · · · · · · · · · · · · · · · ·		·
		To	Pebble s	hale 0 7	382'				
	1					4			
		Bo	ttom Kinga	k silt z	one_e_	8398'	<u> </u>		
						ler & Schlum	-	D	
	NOT	e: Ki	ngak silt	zone is	locall	y identified	silty		
		in				in this wel			
			dentified	from cut	tings)				
							··		·· _ / · · · · · · · · · · · · · · · · ·
GAS OCCURREN		<b>.</b>		1.0		CTTP-01-1-1-01		NT 1	
	Total Gas	Cuttings Gas	Backgrou Un	its	Cı	CHROMATO C2	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
INTERVAL	Units	Units	Before	After	<u> </u>		\		+-3-
							<b></b>		
			·		<del></del>		<del> </del>	_	+
									ļ
	<del></del>				<del></del>		<del> </del>		-
	<del>,,, '</del>			•	•	<u> </u>			•
Ditch Gas (Units):	Background	l <u></u>	Connec	tion		Trip	1	Peaks	
•									
Mud: Wt	Vit	W.L	ph	_ cc Oil	%	Cl <sub>2</sub> ——Ten	ıp	.°F. in	_ <sup>o</sup> F. out
Data Unit:									
			<del> </del>	•					
Depth	<u> </u>	5	hale Density			De Exponent	<del> </del>	Pore Pressur	<u>c</u>
<del></del>	· · · · · · · · · · · · · · · · · · ·	ļ		-	, <u> </u>		<del></del>		
<u> </u>	<del>-</del>	<u> </u>							
Dispatched Sample	<u>s:</u>								
Туј	pe		Inter	rval	<del>-  </del>	No. of Bo	xes	Set N	o
Washed & Dried	Ditch					_			
Unwashed Ditch Unwashed Ditch			7650-8 7650-8			2 2	-	<u>-</u>	
GeoChem (canno			7690-E			2			
Cores		No.						<u> </u>	



WELL	NORTH INI	GOK <b>01</b>			Date	3-12-81	Time	0600	
Present Depth	84781	Pre	vious Depth	847	8 *	Footage 24 J		0'	
Formation(s)	KINGAK SH		·	1	Гор	76481	·		
resent Activity: _	Taking SW	С		• :					
ITHOLOGIC DE	SCRIPTION						•		
lata and Danastad			Sam	oling Inter	vat	ft. S	mnle Ovalits		
Lag Time:		min. @		ft.					
	-				•			Avg. Di	rill Rate
Interval	1 747 50		AND SHOT VET	escription		<del>.</del>	· · · · ·	- mi	n./ft.
	KAN_SU	011. 18815. 8	AND SHOT AFT	LOCIII S	SUKVEI.			<del>                                     </del>	
·····				<u> </u>					
				· · · · · · · · · · · · · · · · · · ·				<del> </del>	
			<del></del>					<del> </del>	
				· <b>-</b> -					
			<u>.</u>		<del></del>			<del> </del>	
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						· · · ·			
		<del>- ,</del>	·		<del></del>				
GAS OCCURRED	NCE/SHOWS		- · · · <u>- · · · · · · · · · · · · · · ·</u>	<del>.</del>	<del>.</del> .				<del></del>
	Total Gas	Cuttings Gas	Backgroun Units			CHROMATOG	<b>КАРН (РРМ</b>	i)	
INTERVAL		Units	Before	After	C <sub>1</sub>	C <sub>2</sub>	С3	C <sub>4</sub>	C <sub>5</sub>
,									+
	-								1
								· <b>-</b>	+
				!				<u> </u>	
Ditch Gas (Units):									
	Background	-	Connectio	on	1	[rip	Peak	3	<del></del>
Mud: Wt	Vis	_ W.I	ph	cc Oil	% Cla	Temo	30 20	in	0E 011
					~ ~ ~ . <sub>2</sub> .	= 0 000pm	•	. <b>H</b> . ————	. 1, 000
Data Unit:									
Depth		S	hale Density		Dc F	Exponent	<del></del>	Pore Pressure	
						<u> </u>			
			<del></del>		·		<del>                                     </del>		
		<del></del>				<del></del> .	+	<del></del>	
Dispatched Sample	es:	· · · · ·		···········			•		
Ty Washed & Dried	/pe Ditch		Interval	<u> </u>		No. of Boxes		Set No	1.
Unwashed D. ah	(Paleo)								
Unwashed Ditch GeoChem (c. nn			-						
Cores		No.				·			



VELL N	ORTH INIG	OK #1			Date	3/13/81	Time	0600	
esent Depth 8	478	Pre							
rmation(s) <u> </u>									
sent Activity:									
THOLOGIC DESC									
				mpline Inter	tev	2.4	ample Ouvlity		
erval Reported		rui <b>n</b> . @		_ft.	· · · · · · · · · · · · · · · · · · ·	, 11. 5	empre Quanty,		
								Avg. Dr	ill Data
Interval	1		<del></del> -	Description		·	<u>.</u>	mi:	n./ft.
<del></del>	Shot	52 SWC.							
· · · · · ·									
				·.			·	<del>                                     </del>	
								<u> </u>	
<del></del>	<u> </u>							<del> </del>	•
									•
								<u> </u>	
	<u> </u>	<del></del>				/2 pint cans 2 dozen)		1	
						400010			
	<u> </u>			···	<u> </u>				
	<u> </u>	· ·	<del></del>			·			
			<del></del>					ļ	
	<u> </u>					·			-
AS OCCURRENC	E/SHOWS Total	Cuttings	Backgrou	d C		CVID ON A LEDO			
INTERVAL	Gas Units	Gas	Un	its i	c <sub>1</sub>	CHROMATOC C <sub>2</sub>	<u> ,карн (ррм)</u> Сз	C4	C <sub>5</sub>
HIEKYAL	Units	Units	Before	After	01				1 %
•								<del> </del>	<del> </del> -
	+ +		·						
			····						1
tch Gas (Units):									
ten cas (chao).	Background_		Connect	tion	<del></del>	Trip	Peaks		
. w. 17.	3 V: 85	wr 4.1	nh 9.0	) Oil	0 & 01-	700 Temp.	- 0=	:_ <b>-</b>	05 .
fud: Wt. 11.	<u>v.</u> 10 <u></u>	**	pn	_ 00 0#		1emp.		ш ——	. r. out
ata Unit:									
Depth	<del></del>	S	hale Density	ı	Dc	Exponent		Pore Pressure	1
···-			·		·····				
."			-		<u>.</u>	··			
spatched Samples	<u> </u>			<del></del>					
Тур	8		Interv	nal .		No. of Boxe	3	Set No	),
Washed & Dried D Unwashed Ditch (						· - · · · · · · · · · · · · · · · · · ·			
Unwashed Ditch (	USGS)					7 ' to b' <u>vil - to</u>			<del></del>
GeoChem (canned	·	No				<u> </u>			



	INIGOK	#1			_ Date	3/14/81	Time	0600	
ent Depth <u>8478</u>	11	Pre	vious Depth _	<del></del>		_ Footage 24	Hrs	<del>-</del>	
nation(s)				т	PP				
ent Activity: Runn	1ng_9-5	/8" interp	mediate cas	ing.					
HOLOGIC DESCRI	IPTION								
rval Reported			San	npling Interv	al la	ft. S	Sample Quality_		
Time:	:	min. @	<del> </del>	ft.					
T-4+1								Avg. Dr	ill Rate
Interval	Have	run 80 10	pints of 19	Description				100	1./11.
									<u> </u>
					····				
· · · · · · · · · · · · · · · · · · ·		······································	· · · · · · · · · · · · · · · · · · ·						···
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								<del>                                     </del>	
					<del></del>				
AS OCCURRENCE	/SHOWS								
AS OCCURRENCE	Total	Cuttings	Backgrov			CHROMATO	GRAPH (PPM)		
AS OCCURRENCE		Cuttings Gas Units	Backgrot Uni Before	its í	c <sub>1</sub>	CHROMATO	GRAPH (PPM)	C <sub>4</sub>	C <sub>5</sub>
<del></del>	Total Gas	Gas	Uni	its í	c <sub>1</sub>				C <sub>5</sub>
	Total Gas	Gas	Uni	its í	c <sub>1</sub>				C <sub>5</sub>
	Total Gas	Gas	Uni	its í	c <sub>1</sub>				C <sub>5</sub>
	Total Gas	Gas	Uni	its í	c <sub>1</sub>				C <sub>5</sub>
INTERVAL	Total Gas	Gas	Uni	its í	c <sub>1</sub>				C <sub>5</sub>
INTERVAL	Total Gas Units	Gas Units	Uni Before	ts After		C <sub>2</sub>		C4	
INTERVAL	Total Gas Units	Gas Units	Uni Before	tion		C <sub>2</sub>	C3	C4	
interval.	Total Gas Units	Gas Units	Uni Before	tion		C <sub>2</sub>	C <sub>3</sub>	C4	
interval.  ch Gas (Units).  fud: Wt. 11.3	Total Gas Units	Gas Units	Uni Before	tion		C <sub>2</sub>	C3	C4	
interval.  ch Gas (Units).  fud: Wt. 11.3  ata Unit:	Total Gas Units	Gas Units	Connec	tion	O% C1	C <sub>2</sub> Trip		C4	_oF. out
interval.  ch Gas (Units).  fud: Wt. 11.3	Total Gas Units	Gas Units	Uni Before	tion	O% C1	C <sub>2</sub>		C4	_oF. out
INTERVAL  tch Gas (Units):  fud: Wt. 11.3	Total Gas Units	Gas Units	Connec	tion	O% C1	C <sub>2</sub> Trip		C4	_oF. out
INTERVAL  tch Gas (Units):  fud: Wt. 11.3	Total Gas Units	Gas Units	Connec	tion	O% C1	C <sub>2</sub> Trip		C4	_oF. out
interval.  ch Gas (Units).  fud: Wt. 11.3  ata Unit:	Total Gas Units	Gas Units	Connec	tion	O% C1	C <sub>2</sub> Trip		C4	_oF. out

Туре	Interval	No. of Boxes	Set No.
Washed & Dried Ditch	4600-8070	8	2 sets, 4 bxs ea.
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		<u> </u>



## DAILY GEOLOGICAL REPORT

Background Connection Trip Peaks  Mud: Wt. 10.3 Vis 62 W.I. 6.5 ph 9.0 cc Oil 7 %Cl2 700 Temp. of, in of, out  Data Unit:  Depth Shale Density Dc Exponent Pore Pressure  Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (Paleo) Unwashed Ditch (USGS)  GeoChem (canned)	WELL	North	Inigok #	<b>1</b>		Date_	3/15/81	_ Time	0600	
	Present Depth	84781	Previ	ious Depth _	8478	•	Footage 24 Hr	t	0	
AND DESCRIPTION  AND DE	Formation(s)	Kingak	<u> </u>			Тор	7648' (sample	es)		
Sumpling Interval   Ft. Sample Quality	Present Activity:	WOC, 1	an 9-5/8	" interme	diate ca	sing to	TD, lost circu	ulation.	<del></del>	
Sumpling Interval   Ft. Sample Quality	LITHOLOGIC DESCRI	PTION								
			n. @	Sa	mpling Inter	-val	ft. Sam	ple Quality_		
Description			-							
GAS OCCURRENCE/SHOWS	Interval				Description				Avg. Dri	ill Rate 1./ft.
GAS OCCURRENCE/SHOWS							·			
GAS OCCURRENCE/SHOWS				-	_					
GAS OCCURRENCE/SHOWS					· · · · · · · · · · · · · · · · · · ·					·····
GAS OCCURRENCE/SHOWS										
GAS OCCURRENCE/SHOWS										
GAS OCCURRENCE/SHOWS   Total Gas Gas Units Units   Before   After   C1   C2   C3   C4   C5										
GAS OCCURRENCE/SHOWS   Total Gas Gas Units Units   Before   After   C1   C2   C3   C4   C5			<u>-</u> .						·	
Total Gas Gas Gas Units Before After C1 C2 C3 C4 C5  Units Before After C1 C2 C3 C4 C5										
Total Gas Gas Gas Units Before After C1 C2 C3 C4 C5  Units Before After C1 C2 C3 C4 C5				·						
Total Gas Gas Gas Units Before After C1 C2 C3 C4 C5  Units Before After C1 C2 C3 C4 C5										
Total Gas Gas Gas Units Before After C1 C2 C3 C4 C5  Units Before After C1 C2 C3 C4 C5							···			<del></del>
Total Gas Gas Gas Units Before After C1 C2 C3 C4 C5  Units Before After C1 C2 C3 C4 C5			<del></del>		<del></del>					
Total Gas Gas Gas Units Before After C1 C2 C3 C4 C5  Units Before After C1 C2 C3 C4 C5										
Total Gas Gas Gas Units Before After C1 C2 C3 C4 C5  Units Before After C1 C2 C3 C4 C5	GAS OCCURRENCE	SHOWS			•		<del></del>			
INTERVAL   Units   Units   Before   After   C1   C2   C3   C4   C5		Total					CHROMATOGR	АРН (РРМ)		
Ditch Gas (Units).  Background	INTERVAL			Un Before	its After	c <sub>1</sub>	C <sub>2</sub>	C3	C <sub>4</sub>	C <sub>5</sub>
Ditch Gas (Units).  Background		-								
Ditch Gas (Units).  Background										<u> </u>
Background Connection Trip Peaks  Mud: Wt. 10.3 Vis 62 W.I. 6.5 ph 9.0 cc Oil 7 %Cl2 700 Temp. of, in of, out  Data Unit:  Depth Shale Density Dc Exponent Pore Pressure  Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (Paleo) Unwashed Ditch (USGS)  GeoChem (canned)			<del></del>		<u> </u>					<b> -</b>
Background Connection Trip Peaks  Mud: Wt. 10.3 Vis 62 W.I. 6.5 ph 9.0 cc Oil 7 %Cl2 700 Temp. of, in of, out  Data Unit:  Depth Shale Density Dc Exponent Pore Pressure  Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (Paleo) Unwashed Ditch (USGS)  GeoChem (canned)										
Background Connection Trip Peaks  Mud: Wt. 10.3 Vis 62 W.I. 6.5 ph 9.0 cc Oil 7 %Cl2 700 Temp. of, in of, out  Data Unit:  Depth Shale Density Dc Exponent Pore Pressure  Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (Paleo) Unwashed Ditch (USGS)  GeoChem (canned)				<del></del>	<u> </u>	!	!		<u> </u>	<u> </u>
Mud: Wt 10.3 Vis 62 W.1 6.5 ph 9.0 cc Oil 7 % Cl2 700 Temp. oF, in oF, out  Data Unit:  Depth Shale Density Dc Exponent Port Pressure  Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GeoChem (canned)	Ditch Gas (Units).	eckmound		Connec	tion		Trin	Davilee		
Depth Shale Density De Exponent Pore Pressure  Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GruChem (canned)		ecvētoning —		Cornicc	uon		- 111p	reaks	<del></del> -	
Depth Shale Density De Exponent Pore Pressure  Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GruChem (canned)	Mud: Wt. 10.3	Vis <u>62</u>	W.I_ 6.5	ph9.0	0 cc Oil		2 700 Temp	of.	in	°F. out
Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GroChem (canned)										
Dispatched Samples:  Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GroChem (canned)	Depth	·····	Sh	ale Density	1	D	c Exponent	T	ore Pressure	
Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GruChem (canned)										
Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GruChem (canned)										
Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GruChem (canned)										
Type Interval No. of Boxes Set No.  Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GruChem (canned)										
Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GroChem (canned)	Dispatched Samples:									
Washed & Dried Ditch Unwashed Ditch (Paleo) Unwashed Ditch (USGS) GroChem (canned)	Туре			Inter	val		No. of Boxes	<del></del>	Set No	<u></u>
Unwashed Ditch (USGS) GeoChem (canned)										
	Unwashed Ditch (US					-			<u> </u>	
	GeoChem (canned) Cores		No.			<u>_</u>				

old one \*



Washed & Dried Ditch

Unwashed Ditch (Paleo)
Unwashed Ditch (USGS)
GeoChem (canned)

Cores

\*

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

	8478	Pre	vious Depth _	8478	•	Footage 2	4 l <del>ls</del>	0	
mation(s)									
ent Activity:							<del>-</del>		
OLOGIC DESCR									
	_		Ça	malina Inter	v-1	6	Cassala Ossaltas		
val Reported Time:	1	min. @		_ft.	·	11,	sample Quality		
Interval	<u></u>			_ <del></del>				Avg. Dr	rill Rate in./ft.
	Stac	e cemente	d 9-5/8" d	asing					· · · · · · · · · · · · · · · · · · ·
							<del>,,,</del>	l 	
			·- <u></u>						
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				<del></del>				<u> </u>	
							<del></del>		
						·	<del></del>	1	
		,	-						
					•				
S OCCURRENCE				-		· .			
	Total Gas	Cuttings Gas	Un	und Gas		1	OGRAPH (PPM)		
S OCCURRENCE	Total		Backgro Un Before	its i	C <sub>1</sub>	CHROMATO	C3	C4	C <sub>5</sub>
	Total Gas	Gas	Un	its i	c <sub>1</sub>	1	1		C <sub>5</sub>
	Total Gas	Gas	Un	its After	C <sub>1</sub>	1	1		C <sub>5</sub>
	Total Gas	Gas	Un	its i	<b>c</b> <sub>1</sub>	1	1		C <sub>5</sub>
	Total Gas	Gas	Un	its After	C <sub>1</sub>	1	1		C <sub>5</sub>
INTERVAL	Total Gas	Gas	Un	its After	C <sub>1</sub>	1	1		C <sub>5</sub>
INTERVAL	Total Gas Units	Gas Units	Un Before	After		C <sub>2</sub>	C <sub>3</sub>	C4	
INTERVAL  The Gas (Units):	Total Gas Units	Gas Units	Un Before  Connec	its After After		C <sub>2</sub>	C3 Peaks	C4	
INTERVAL  Gas (Units):  B	Total Gas Units	Gas Units	Un Before  Connec	its After After		C <sub>2</sub>	C <sub>3</sub>	C4	
interval  Gas (Units):  B  d: Wt. 10.3	Total Gas Units	Gas Units	Un Before  Connec	its After After		C <sub>2</sub>	C3 Peaks	C4	
INTERVAL  Gas (Units):  B  H: Wt. 10.3	Total Gas Units	Gas Units	Connec	its After After	% C1	Trip	Peaks	in	°F. ou
interval  Gas (Units):  B  d: Wt. 10.3	Total Gas Units	Gas Units	Un Before  Connec	its After After	% C1	C <sub>2</sub>	Peaks	C4	°F. ou
interval  Gas (Units):  B  d: Wt. 10.3	Total Gas Units	Gas Units	Connec	its After After	% C1	Trip	Peaks	in	°F. ou
interval  h Gas (Units):  B  d: Wt. 10.3	Total Gas Units	Gas Units	Connec	its After After	% C1	Trip	Peaks	in	°F. ou
INTERVAL  Gas (Units):  B  H: Wt. 10.3	Total Gas Units	Gas Units	Connec	its After After	% C1	Trip	Peaks	in	°F. ou
h Gas (Units):  B d: Wt. 10.3	Total Gas Units	Gas Units	Connec	its After After	% C1	Trip	Peaks	in	°F. ou



#### DAILY GEOLOGICAL REPORT

NIGOK #1			Date_	3/17/81	_ Time	0600		
Pro	vious Depth _	84781		Footage 24 Hr	3	0		
k		т	ор	76481				
g mud prepa	ratory to	drilling	out.	· · · · · · · · · · · · · · · · · · ·			··	
	San	mpling Inter	/al	ft. Saп	ple Quality_	•		
_ mui, @	•	_16.						
		Description				Avg. Drill Rate min./ft.		
lled cmt. (	(8223') and		ollar a	nd to end of s	hoe.			
t down to π	ix mud.		<del></del>					
							<u> </u>	
				<del></del>			<del></del>	
	_ <del></del>							
			····					
	. <del>_</del>							
			- · · · · · · · · · · · · · · · · · · ·					
· · · · · · · · · · · · · · · · · · ·				· <del>-</del> ·			<del>-</del>	
					<u>-</u>		<u> </u>	
	<del> </del>		<del></del>					
	Backgrou	and Gas	•	СНЬОМУТОСЬ	APH (PPM)			
Gas	Uni	ts [	Ct			C <sub>4</sub>	C <sub>5</sub>	
1	20.00							
							ļ <u> </u>	
						<del></del>	<del> </del>	
							Ţ <u></u>	
α	Connect	10n		Trip	Peaks .	<del></del>		
W.L	ph	_ cc Oil	% C1	2Temp	of.	in	<sup>o</sup> F. out	
Shale Density			De	Dc Exponent			Pore Pressure	
Orași Printi								
<del>                                      </del>				-	<u> </u>			
	Interv	1		No. of Boxes		Set No.		
	Interv	al		No. of Boxes		Set No		
	Interv	1		No. of Boxes		Set No		
	Cuttings Gas Units  d  W.L.	Previous Depth  Ak  Ag mud preparatory to  Sag  min. @  Cuttings Background Gas Units Before  Units Before  d	Previous Depth 8478'  Ak	Previous Depth	Previous Depth 8478' Footage 24 Hr  the Top 7648'  ag mud preparatory to drilling out.  Sampling Interval ft. Sam  ft.  Description  Liled cmt. (8223') and float collar and to end of so the down to mix mud.  Cuttings Background Gas CHROMATOGR  Gas Units Hefore After C1 C2  Units Before After C1 C2  W.L. ph cc Oil 76 C12 Temp.	Previous Depth	Previous Depth 8478' Footage 24 Hrs. 0  Top 7648'  Ing mud preparatory to drilling out.  Sampling Interval ft. Sample Quality  Indicated cont. (8223') and float collar and to end of shoe.  Sampling Interval ft. Sample Quality  Description min stand.  Avg. Driver and to end of shoe.  Sample Quality  Cuttings Background Gas CHROMATOGRAPH (PPM)  Gas Units Before After C1 C2 C3 C4  Min Connection Trip Peaks  W.L. ph cc Oil %C12 Temp. °F. in "	

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## DAILY GEOLOGICAL REPORT

WELL	NORTH INIGOK #1					Date3/18/81 Time0600					
Present Depth	8478	Pro	vious Depth _			_ Footage 24 l	trs	<del></del>			
Formation(s)				1	Гор						
Present Activity:	Waiting	on weath	er and wat	er; will	_build_m	ud to drill	out.				
LITHOLOGIC DESC	RIPTION										
Interval Reported Lag Time:		min. @	Sa	mpling Inter ft.	val	ft. Sa	imple Quality	у			
Interval	Description								Avg. Drill Rate min./ft.		
<del></del>	<del> </del>							_			
									-		
								<u> </u>			
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								-	-		
<del></del>				<del>_</del> .			<del></del>				
						· · · · · · · · · · · · · · · · · · ·					
GAS OCCURRENC	TE/SHOWS			· · · · · · · · · · · · · · · · · · ·				_L			
GAS OCCORRENC	Total	Cuttings	Backgrou			CHROMATOG	RAPH (PPN	4)			
INTERVAL	Gas Units	Gas Units	Uni Before	its After	$c_1$	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>		
	-								<del> </del>		
									1		
F	1 !	•		<u> </u>	i	1		_ !	_i		
Ditch Gas (Units):	Backeround		Connect	lion		Тлір	Peal	ks			
Mud: Wt	Vis	W.L	ph	cc Oil	% CI	Temp.	oF	. in	.OF. out		
Data Unit:											
Depth	Shale Density			De	Dc Exponent		Pore Pressure				
									_		
Dispatched Samples:	<u> </u>										
Турс			Interv	/al	No. of Boxes			Set No.			
Washed & Dried D Unwashed Ditch (I								<del>.</del>			
Unwashed Ditch (I GeoChem (canned	USCS)										
Cores	· <i>y</i>	No.					<del></del>				

Geologist NORRIS REQUIST



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

WELL	NO, INIGOR	#1			Date_3/1	.9/81	Time	0600	<u>.</u>
Present Depth	8478'	Previou	s Depth	8478		Footage 24 Hrs.	0		
Formation(s)	Kingak Sha	ıl <u>e</u>	<del></del>	Тор	7648				
		prep to dri							
LITHOLOGIC DE									
		min. @	Samp	ling Interval_		ft. Samp	le Quality		
Lag Time:		min. @		ft.					
									ill Rate
Interval		Est drlg o		escription O bee		<u> </u>		T T T T T T T T T T T T T T T T T T T	n./ft.
	NOTE	EST OFIG	uc e 1030					-	
<u> </u>				<del>-</del>				+	
		<del></del>							
						<del></del>			
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			<del>.</del>					<del> </del>	
							<u>-</u>		
						· · · · · · · · · · · · · · · · · · ·		<u> </u>	
GAS OCCURRI	ENCE/SHOWS							<u>.</u> .l	
	Total Gas	Cuttings Gas	Backgroun Units			CHROMATOGRA	PH (PPM	<u> </u>	
INTERVA			Before		C <sub>1</sub>	C <sub>2</sub>	С3	C <sub>4</sub>	C <sub>5</sub>
<del></del>			-						
								<u> </u>	<del> </del>
<del></del>	<u>_</u>	· · <del> </del>						- <del> </del>	<del> </del>
		<b>'</b>		<b>-</b>					
Ditch Gas (Units	): Background		Connectio	on	Tr	ip	Peak	3 <u></u>	
								_	
Mud: Wt	Vis	W.L	ph	cc Oil	%C1 <sub>2</sub> _	Temp	<sup>U</sup> F.	. in	_ºF. out
Data Unit:									
Dep	th	Shale Shale	e Density		De Ex	ponent		Pore Pressur	e
						·			
					<u></u>				
Dispatched Sam	ples:								
		····   ·····	t			No. of Boxes		Set N	
Washed & Dri	Type ed Ditch		Interva			140, OI DOXES		3611	-
Unwashed Dit Unwashed Dit	ch (Paleo)							<del></del> .	<u></u>
GeoChem (ca									
Cores		No.		<del>-</del>			L	<del></del>	
Ceologist	NORRIS REQU	JIS <b>T</b>					N = 4	•	



/ELL	NORTH I	NIGOK #1			Date	3/20/81	Time	0600	
esent Depth	<u>8</u> 5631	Рте	vious Depth _	8478'		Footage 24 l	Hrs. 851		
mation(s)	Kingak :	Shale		т	op <u>7648</u>	3'			
esent Activity:					·	- <del></del>			
THOLOGIC DESCR	IPTION								
terral Perocted	R47R-	8563	Sa:	mpling Inter	val10	ft. S	ample Quality .	Good	
g Time:6	7	min. @8	500	ft.					
								Avg. Dr	
Interval	C's	dle b		Description	1+c+ 1+	brn, f, arc			n./ft. O
8478-8563		thn strs &				52117 17 41	······		<u> </u>
<del></del>	-	_							
· · · · · · · · · · · · · · · · · · ·		·							
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								<u> </u>	
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		<del></del>						<b>_</b>	
	<u> </u>		<del>_</del>					<b>†</b>	
	ļ <u>.</u>	<del></del>		NEED	: GEOC	HEM LABELS	(50)	-	<u> </u>
									·
							<u></u>	<del> </del>	
AS OCCURRENCE	SHOWS			•				<u> </u>	
	Total Gas	Cuttings Gas	Backgroi Un		· ·	CHROMATO			
INTERVAL	Units	Units	Before		C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	600	C <sub>5</sub>
8530-8540	70	<u> </u>	55 🛌	40	8000	2400	900		300
		·							
									1
	<del> </del>			<del> </del>					<del>                                     </del>
itch Gas (Units):	Background	l	Connec	tion		Trip	Peaks	i	
w. 10 9	) ar 21	7 10 7 14	5 10.	5 0: 0	Ø. C1.	27000 Temp	78 or	in 81	0E 011
Mud: Wt. 10-0	<u>.                                    </u>	W.L <u></u> -	pn	e ce on _e	70 C.17	<u> </u>	. <u></u> - F.	ш ———	. 1. 000
Data Unit:									
Depth		<u> </u>	Shale Density		Dc	Exponent		Pore Pressure	<u> </u>
8500			2.48		1.	. 57	<del>-</del>		
		<u> </u>							
							<u></u>		
Dispatched Samples:									
		<u>-</u> . ,	Inter	val .	··	No. of Boxe	<del></del> -	Set No	<u> </u>
Type Washed & Dried Di				7 = 4					
Unwashed Ditch (P Unwashed Ditch (U					Ţ				
GeoChem (canned)									
Cores		No.			1				



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

#### DAILY GEOLOGICAL REPORT

VELL	NO. INIC	GOK #1			Date	3/21/81	Time	0600	
resent Depth	8590'	, Pre	vious Depth _	85631		Footage 24	Hrs	27.	
ormation(s)	Kingak :	Shale	<u></u>	1	Гор	7648'			
resent Activity:	Drillin	<b>=</b>	- <u>-</u> .						
ITHOLOGIC DESCR	UPTION								
nterval Reported		90 ນົກ. @	Sar 8500	mpling Inter ft.	val	10 ft.	Sample Quality	Good	
									*** D
Interval	1			Description					ı./f <b>t.</b>
<u>8563-8573</u>			10', rec. wandlike			brn-gy, sm,	, splty,	19	
								1	
<u>8573-8590</u>	Sh,	v dk brn-	gy, sm, sp	olty, tr	pyr	<del> </del>		5	
	1						· ·	1	
	<u> </u>								
	<del> </del>						<del></del>	<del> </del>	
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							<u> </u>		
						··			
<del></del>	1							+	
	<u> </u>							Ⅎ.	
GAS OCCURRENCE	F/SUON'S	(110117)	· · · · · · · · · · · · · · · · · · ·				·		
GAS OCCORRENCE	Total	(NONE) Cuttings	Backgrou			CHROMATO	GRAPH (PPM	()	
INTERVAL	Gas Units	Gas Units	Un Before		C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C4	C <sub>5</sub>
				<del> </del>					
	+			<u> </u>	-	1			ļ·
						<b>_</b>	<u> </u>		<del> </del>
	1 !		<u>.</u>	!	!		<u> </u>	<u> </u>	<u> </u>
Ditch Gas (Units):	Dankaraund	50	Connec	tion :	_	_ Trip	Davi	<b>.</b> -	
	Park Stonia		COIDIO			_ Inp		<b></b>	
Mud: Wt. 10.6	Vis 43	W.L <u>_13.</u>	5 ph 9.5	cc Oil	<u>0</u> %C	1 <sub>2</sub> 23000 Tem	p oF	. in	°F. out
Data Unit:		•							
Depth			hale Density			Oc Exponent		Pore Pressure	1
						<u>-</u>			
Dispatched Samples:									
Туре			Inter	val		No. of Box	ces	Set No	).
Washed & Dried Di Unwashed Dirich (P						<del></del>		<del>_</del> ,	
Unwashed Ditch (U	ISGS)								
GeoChem (canned) Cores	·	No.						<u> </u>	

No.



₽.

Cores

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

VELL	NO. INIO	OK #1			Date	3/22/81	Time	0600	
resent Depth			Previous Depth _	•		_ Footage 24 Hr			
ormation(s)								_	
resent Activity:									
				•					
ITHOLOGIC DESCI		390 min. @	Sar 8895	npling Inter ft.	val <u>10</u>	ft, Sam	ple Quality .	Good	<u> , </u>
Interval	ı			Description					ill Rate n./ft.
8590-8890	Sh,	v dk brn	-gy, sm, flk	y, splty				4	.0
<del></del>	1				<del></del>	<del>-</del>			
				<del></del>				<del> </del>	
									•
					· · · · · · · · · · · · · · · · · · ·			<del>                                     </del>	
			· · · · · · · · · · · · · · · · · · ·						· - · · · -
	<del>- </del>		<del></del>			<del></del>		<u> </u>	·····
	<del> </del>	<del></del>						<del> </del>	
····	1								
	1		· · · · · ·	<del> </del>				<del> </del>	
	· <u> </u>					<u></u>		1	
	<u> </u>							1	
GAS OCCURRENC	E/SHOWS								
	Total	Cuttings				CHROMATOGR	АРН (РРМ)		
INTERVAL	Gas Units	Gas Units	Uni Before	its After	c <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
8740-8750	80	0	65	55	7500	2200	1000	700	300
8800-8810	110	. 0	85	85	9500	400	1500	900	500
									<u> </u>
						-			
									1
								110 @ 8	805
Ditch Gas (Units).	Background	90	Connec	tion120	D	Trip	Peaks		
:									
Mud: Wt. 10.5	9 Vis 41	W.L	8.2 ph 9.0	_ cc Oil	% C1	2 22000 Temp.	103 °F.	in <u>102</u>	_°F. out
Data Unit:		•	•						
Depth			Shale Density		D <sub>0</sub>	Exponent		Pore Pressur	e
8600 8700	<del></del>	<del></del>	2.47 2.50			1.53	<u> </u>		
8800			2.45			1.47			
8875			2.48			1,47	<u> </u>		
							1	<del></del>	
Dispatched Samples	<u>.</u>								
Турк	<u> </u>	<b>1</b>	Inter	val	<del></del>	No. of Boxes	· <del></del> -	Set N	'a.
Washed & Dried D			21.101	. <del>.</del>		DUNUS			
Unwashed Ditch (I Unwashed Ditch (I									
GeoChem (canned									



#### DAILY GEOLOGICAL REPORT

WELL	NO. INIG	OK #1			Date_	3/23/81	Time	0600	
resent Depth									
Formation(s)									
Present Activity:						_	_		
LITHOLOGIC DES	CRIPTION						<u>-</u>		
Interval Reported	-	0 min. @	9150 Sa	mpling Inte	rval	10 ft. 5	Sample Quality	yGood	
Interval	<u> </u>			Description	n				rill Rate in./ft.
8890-9120	Sh.	v dk brn-	gy, sm, fl	lky, spl	ty			4.	. 5
9120-9150	Sh	as abv w/	tr sltst,	gy, shy	, tt, no	fluor	·	6.	.0
9150-9170	Sh.	v dk brn-		ller enl	+11				
	3117		AX SW I	rya, spi	<u></u>		-		.0
								1	
						···		<del> </del>	
						······································			
	<u> </u>			· · ·	<del>.</del>	·		<del> </del>	
		·			<u>_</u>			<del> </del>	·
	<del>-                                    </del>	<del></del> -	<del></del>						·
	1				<del></del> -		<del></del>		
-	1	<u> </u>				<del></del>		<del>-</del>	
						·		<del>                                     </del>	
	<u> </u>								
GAS OCCURREN	CE SHOW'S				<del></del> -				
	Total	Cuttings	Backgrou	ind Gas		CHROMATO	GRAPH (PPM	n	
INTERVAL	Gas Units	Gas Units	Uni Before	ts	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	, C4	C <sub>5</sub>
8930-8940	170	NC.	130	145	16000	8500	1400	2000	1000
9080-9095	135	NC	125	120	14000	7000	1200	1600	700
9140-9145	150	NC	100	125	150 <u>00</u>	7500	1300	2500	800
					†			<del> </del>	<del> </del>
	1 . 1	<u> </u>			1		<del></del>	. ]	
Ditch Gas (Units).	<b>.</b>	3.50		. 23	•	Trip 400 (Er	ort.	170 @ 8	B940
	Background.	150	Connect	ion <u>21</u>	.0	Trip 400 (Ex	Peak	<u> 150 @ 9</u>	9145
W. 11.	.2 va. 46	wr 10.	2 9.0	) On 0		22000 Temp	111	. 107	
Mud: Wt11.	<u> </u>	W.L	pn	_ a 01_		2 lemp	·	in	.ºF. out
Data Unit:									
- William						·			
Depth 8900			hale Density		Dc	Exponent		Pore Pressure	;
			2.40 2.43			1.46	<del></del>	-	
9100	_		2.47			1.54			
9150			2.49			1.63		-	
							<del>                                     </del>		
	•	_	<del></del>						<u> </u>
Dispatched Samples	<u>s:</u>								

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch	8080-8640	l ea set	1 & 2
Unwashed Ditch (Paleo)	8478-8900	1 (box #14)	
Unwashed Ditch (USGS)	8478-8900	1 (box #14)	
GeoChem (canned)	8420~9180	1 (boxes #23.24.2	5)
Cores	No. 5 8563-8573	4	-
SW CORES	2610-8478	5 (one bundle)	1



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

	INIGOK #1					3/24/81		•				
Present Depth94							Hrs300					
Formation(s) <u>Ki</u>		<u>e</u>		1	Top	181						
Present Activity: <u>Dr</u>	illing			<del></del> –		<u> </u>						
LITHOLOGIC DESC	RIPTION											
Interval Reported	9170-949	0	Sar	npling Inter	val10	ft. 5	Sample Quality	Good				
Lag Time: 71		ங் <u>ர</u> , @	9482	ft.								
								Avg. Dri	ll Rate			
Interval	1		Description									
9170-9460_	sh,_	y dk brn-g	y. sft. s	m. flky	splty			4.8				
9460-9485	Sh,	v dk brn-q	dk brn-gy, sm, w/ ltl f slty sh, 100 units gas									
					-							
	<del> </del>				<del> </del>	<del></del>	<u> </u>	<del>                                     </del>				
	<del> </del>	<del></del>		=								
				1		gt Geochem						
						clamps (er r approx. 2		<del> </del>				
					-10		2000_7					
							<del></del>	<del></del>				
	1	<del></del>	***					<del>                                     </del>				
	<u> </u>		• • • • • • • • • • • • • • • • • • • •	•								
	<del>                                     </del>							<del>  - · · · -</del>				
GAS OCCURRENC	E/SHOW'S											
	Total Gas	Cuttings Gas	Backgrot Un		<del></del>	CHROMATO	GRAPH (PPM	<u> </u>				
INTERVAL	Units	Units	Before	After	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>			
<u>9235-50</u>	180		160	150	19000 20000	4500 5000	1200 1500	1200	500			
9335~50 9465-90	200 250		165 150	180	-		-	1500	500			
							<b>.</b>		<b>.</b>			
	<del></del>			<del>                                     </del>	· · · · · · · · · · · · · · · · · · ·				1			
					]				1			
n n								200 9	9340			
Ditch Gas (Units).	Background.	150	Солпес	tion25	0	Trip	Peal	cs <u>250 @</u>	9480			
					_	01.000	335					
Mud: Wt. 11.	. 2 Vis <u>65</u>	W.L10_	4_ phll.	O cc Oil	<u>0</u>	2 <u>21000</u> Tem	p. 115 °F	. in _ <del>90</del> _	°F. out			
Data Unit:												
					,							
Depth		SI	nale Density			Exponent 1.55		Pore Pressure				
9200			2.42 2.40			1.56		-				
9400			2.46			1.50						
9450			2.47			1-49						
Dispatched Samples	<u>s:</u>											
177	ж		Inter	val		No. of Box	es	Set No	),			
Washed & Dried	hich											
Unwashed Ditch ( Unwashed Ditch (							<del>-</del>		<del></del>			
GeoChem (canne									<del></del>			
Cores		No			. 1		1		_			



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Geologist ....

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

ELL	NORTH II	NIGOK #1			Date_	3/25/81	Time	0600	
resent Depth	9823'	Pre	vious Depth _	9495	1	Footage 24	Firs.	328'	
rmation(s)	Kingak :	Shale	<u></u>	7	Гор7	648'	<u>.</u>		
sent Activity:	Drilling	<b>3</b>							
THOLOGIC DESCR		2000	_						
terval Reported	949U-:	ил. @	9800 Sai	mpling Inter ft.	val		Sample Quality_	GOOD	
	_								
Interval				Description				Avg. Dril min	
9490-9820	Sh.	v dk brn-				tr pyr. qt	z vein	3	·
		780-95.							
				<del></del>				<u> </u>	
	-								
	<u> </u>								
						•			
	<del> </del>								
<del> </del>		<del></del>							
	<del> </del>			<del></del>		<del></del>			
	-			<del></del>					
GAS OCCURRENCE	USHOWS			-				<u> </u>	
MB OCCORRENCE	Total	Cuttings	Backgrou	and Gas		CHROMATO	GRAPH (PPM)		
INTERVAL	Gas Units	Gas Units	Uni Before	its [ After	C <sub>1</sub>	C <sub>2</sub>	Сз	C <sub>4</sub>	C <sub>5</sub>
9580-95	230. ]	-	200	200	26000	6000	9000	1000	500
9655-65	200		170	165	24000	7000	5000	900	500
9775-95	450	-	220	350	46000	10500	8000	1800	1000
	<del>                                     </del>								
	<del></del>	1		<u> </u>	!	]		<u> </u>	<u> </u>
tch Gas (Units):				_	_		{short}		
<u> </u>	Background_	350	Connect	tion6	50	Trip600	{short} {trip }Peaks	<u>450 @ 97</u>	80
iud: Wt.11.4	_ Vis <u>44</u> _	W.L.,9.,6.	ph	∐ cc Oil	U % C1	2 <u>22000</u> Temp	5 <u>112</u> _°F.	is	r. out
ata Unit:									
								<u> </u>	
Depth		S	hale Density		Dx	Exponent		Pore Pressure	
9500 9600			2.47			1.43	<del></del>	<del></del>	
9700			2.47			1.52			
9800			2.44			1.43			<del></del>
		·····-		1		<u> </u>		····-	
		<del></del>	<del></del>			<del>-</del>			
spatched Samples:									
Туре			İnter	val	T	No. of Box	es T	Set No.	
Washed & Dried Dit				_ <del>`</del>					
Unwashed Ditch (Pa									
Unwashed Ditch (U GeoChem (canned)		<del></del>	· · ·			<del> </del>			
Cores		No.							



NORRIS REQUIST

Geologist \_

#### TETRA TECH, INC. U. S. GECLOGICAL SURVEY/ONPRA

#### DAILY GEOLOGICAL REPORT

WELL	NORTH INI	GOK #1			Date_	3/26/81	Time	0600	
Present Depth	9933'	Pre	vious Depth _	9823		_ Footage 24	Hrs	110'	
Formation(s)			<u> </u>			_			_
Present Activity:		for new b			•	•			
-						· · · · · · · · · · · · · · · · · · ·			
LITHOLOGIC DES									
Interval Reported Lag Time:	9820-9933 77 ,	min. @		mpling Inter ft.	rval	ft. S	lample Quality.	Fair_	
Interval	1			Description	ı			Avg. Dri min	ll Rate ./ft.
9820-9933	Sh.	v_dk-brn	-gy, sm, s	ft, flky	splty.	tr pyr, far	calc		1.5
	vei	ns 0 9890	-9933					<u> </u>	
			·· · · · · · · · · · · · · · · · · · ·				<del></del> -	<del> </del>	
								<u> </u>	
								<del> </del>	
							,		
								-	<del></del>
		·							
	-								
						<del></del>			
	<del>-  </del>			·	-			<del> </del>	
									<u></u>
							<u> </u>	<del> </del>	
GAS OCCURREN	CE/SHOWS			_			<u>.</u>	1	<del>-</del>
	Total Gas	Cuttings Gas	Backgrou Uni		<del></del>	CHROMATO	GRAPH (PPM)		
INTERVAL	Units	Units	Before	After	C <sub>1</sub>	c <sub>2</sub> ·	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
9810-25	500	NC	300	350	68000	9000	10000	1800	1000
9895-9910	400	NC NC	300	300	60000	10000	10000	1500	600
							· · · · · · · · · · · · · · · · · · ·		
				-					
	+ +			<del> </del>	1		· <del></del>	1	<del>                                     </del>
				1					
Ditch Gas (Units):	Background	225 8 99	30 Connect	tion 650	0 9899	Trip	Donles	500 <b>8</b> 98	120
	packground.		Connect	11011	4 5055	тпр	1 5 A KS	300 ( )0	
Mud: Wt. 11	.7. Vis 46	W.L9.	4 ph. 10.0	_ cc Oil	0% C1 <sub>2</sub>	22000 Temp	96.7 of	in 58.8	F, out
			_						
Data Unit:									
Depth		s	hale Density	<u>-</u>	Dc	Exponent	<u> </u>	Pore Pressure	· ]
9800			2.47			1.43	<u> </u>	-	
_9850			2.46			1.40		-	
9900	<u>'</u>		2.38			1.44	<del></del>	~	
							<u> </u>		
Dispatched Samples	s:								
	<u> </u>						. <u>.                                   </u>		
Typ Washed & Dried I	<del></del>		Interv	/al		No. of Boxe	<u> </u>	Set No.	
Unwashed Ditch		<del></del>			<del></del>			·	
Unwashed Ditch (	(USGS)			·					
GeoChem (canno	(b)	l No							
Cores		No.						<del> </del>	

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WELL NO. IN	IGOK #1	<u> </u>			Date_	3/27/81	Time	0600 _	<del></del>
Present Depth 10122		Pre	vious Depth _	9933	•	Footage 24 Hr	s	189'	
Formation(s) Sag	River				Гор	100971			
Shu Present Activity:	ıblik	Circulat	ting up sam	nples	=	10109'			
LITHOLOGIC DESCRI									
Interval Reported		0122	Sar	npling Inter	val	10ft, Sam	ple Quality	Fair	
Lag Time: 78		nin. @ <u>1</u> 0	0100	_ft.					
								Avg. Dri	ill Rate
Interval	_			Description					1./ft.
9933-10097	Sh	v dk gy,	sm, flky,	splty w	/ tr qtz	& calc veinir	ıg		6.5
10097-10109	s1t	st, gy, f	, shy, hd,	tt, abu	nt <b>v f</b> g	lau		<u> </u>	5.5
10109-10122	Ls.	It tan t	o gy, mot,	gran. &	dk av m	icxl		<del> </del>	6.0
	==1.		2. 1.1						
				<u> </u>				1	
					· ·				
				<u>-</u> -					
			•	· · ·					··· -
						<u> </u>		ļ	<del>-</del>
								<u> </u>	
							<del></del>	<del>                                       </del>	
GAS OCCURRENCE	SHOWS Total	Cuttings	Doolomo	and Coo		CHROMATOCE	ADU /DDAG		
	Gas	Cuttings Gas	Backgrou Uni	ts	Ci	CHROMATOGR C2	<u>ағн (ғғм.</u> Сз	C <sub>4</sub>	C <sub>5</sub>
INTERVAL 10065-75	Units 500	Units -	Before 250	200	45000	7000	700	1800	700
10100-105	450		225	250	40000	5000	600	1600	600
									<u> </u>
								-	
District of the bound		•	• • •						
Ditch Gas (Units):	ackground.	250	Connect	ion		Trip	Peaks	s	<del></del>
w. 11.7	44			0.4	۰ <b>-</b>	24000	114.05	. 115	05
Mud: Wt	_ Vis44	W.L <del>Y</del> .	<u>σ</u> _ bμ <u>"                                  </u>	_ cc Oil	<u>V</u> % (1	2 <u>24000</u> Temp	<u> </u>	m <u>113</u>	or. out
Data Unit:									
Depth	r		Shale Density	Т	Do	Exponent	γ	Pore Pressure	
9950			2.42			1.52		_	
10000 10050			2.40 2.45	<del></del>		1.51	<u> </u>	<del>-</del>	
10100			2.48			1.69			
	1						<u> </u>	·· · · · ·	. —
Disputabed Co-less	L		<del></del>						
Dispatched Samples:									
Type	-h		Interv	al		No. of Boxes		Set No	
Washed & Dried Ditch Unwashed Ditch (Pal	leo)								
Unwashed Ditch (US GeoChem (canned)			<u></u>		<u>_</u>				
Cores		No.	<del></del>					·	
	is REQUI	cm.						-	
Geologist NORR	TO VECUT	-21			٠ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ	•-			



Cores

No.

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

etra tech, INC.		.v #1 '			Data	3/28/81	Time	0600	
						Footage 24 H		39'	
•			vious Deptit _			10,097'			
rmation(s)S	sag <u>kive</u> Shublik	<u></u>		1	ор	10,109'			
sent Activity:		· · · · · -			<del></del>	<u> </u>		<del></del>	
THOLOGIC DESCRI	IPTION								
ierval Reported	101	22-10160	Sar	npling Inter	val	10 ft. Sar	nple Quality	Fair	
g Time: 80	г	nin. @	10150	ft.					
								Avg. Dri	ill Rate
Interval		<del></del>		Description					ı./ft
	Cut	ting Core	#6:		<b>5&gt;</b>	22 - 1- 15-		<del> </del>	
		Pener	tration rat		foot foot	22 min/ft 22 min/ft			
					foot	22 min/ft			
·				4	foot	15 min/ft		<del></del>	
10122-10160	T.S.	It ov - (	lk gy, mot	. miero :	xvl. fos			4	
			317 mgr					Ţ	· ·
									<del></del>
								1	
		·· ·· · · · · · · · · · · · · · · · ·				·	·	+	
	ļ	<del> </del>						-	
				•				<del>_</del>	
						·		<u> </u>	·-··
SAS OCCURRENCE INTERVAL	Total Gas Units	Cuttings Gas Units	Backgrot Un Before			CHROMATOG:	RAPH (PPM C <sub>3</sub>	(1) C <sub>4</sub>	C <sub>5</sub>
10137-10147	<del></del>		150	175	45,000	10,000	600	1000	400
	<del> </del> -	•					<del></del>	-	<del>-}</del>
									1
									1_
					<del>                                     </del>			<del> </del>	+
			·	·	<b>-</b>	·			•
tch Gas (Units):	Rackground	150	Connec	tion 3	00	Trip425	Peal	cs 300 @ 1	0145
Mud: Wt. 11.7	Vis <u>44</u>	W.L_9.	8 ph 9.3	cc Oil	% C1	2 22K Temp	of	. in	.ºF. ou
<del></del>									
Data Unit:									
Depth	-	:	Shale Density	<del></del> -	Do	Exponent	T	Pore Pressure	
10050			2.45			1.41		-	
10100			2.48 2.55		<del></del>	1.69			
10150			2.33						
		-					<del>-</del>		
			<u>,</u>	i	<del></del>				
Dispatched Samples:									
Туре		<del></del>	Inter	val		No. of Boxes	<del></del>	Set No	
Washed & Dried Dit		<del>-  </del>	Aitei			1.0. 01 00.03			
Unwashed Ditch (Pa	ales.)								
Unwashed Ditch (U GeoChem (canned)			<del></del>	<del></del>					
		<del></del>	•***		<del></del>				



VELL	NO. INIG	ok #1			_ Date_	3/29/81	Time_	0600	
resent Depth									
ormation(s)	Schublik			То	P	10109'			
resent Activity:						· · · · · · · · · · · · · · · · · · ·			
				-					
ITHOLOGIC DESCR	10160-101	<b>7</b> 0	Çan	anline Interva	1	10 ft. S	ample Qualit	ty Good	<u> </u>
nterval Reported	n	in. @1	150	_ft.	·,			,	
									. Drill Rate
Interval				Description				<del></del>	min./ft.
10160-10170	Core	#6: <u>Cut</u> 0- <u>101</u> 70	s rec. 10	myly at	cal. A	fos.		<del></del>	19
	1			<u> </u>					
	TDI	og: 1017	1			<del>-</del> · · · · · -			
	POI	Tops: (C	NL/FDC)						
		- Ga	g R. 10,0	961				-	<del></del>
		Su	blik 10,1	108					
		<u></u>				_ · <del>-</del>			
<u>-</u>									
	<del></del>					· · · · · · · · · · · · · · · · · · ·			
:									
						<del></del>			
				·					
GAS OCCURRENC	E/SHOWS Total	NONE Cuttings	Васкуто	and Cas		CHROMATO	GRAPH (P)	PM)	
	Gas	Gas	Un	iits į	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C.	4 C <sub>5</sub>
INTERVAL	Units	Units	Before	After					
			<u> </u>	-		<u> </u>			- <del></del>
	<del> </del> -								
				<u> </u>		<del> </del>			
		<u> </u>	!	<u>.</u>		1	1		<del>,  </del>
Ditch Gas (Units):		75	<b>C</b>	-*:	_	Тп́р250	) p	kaks .	<del>-</del>
	7 Vis 44	W.I_ 9.8	9.	3. cc Oil	<u>-</u> _%c	21 2 22K Tem	p. <u>99</u>	°F. in _	65of. ou
Mud: Wt11.						-			
Data Unit:									
Depth	<u> </u>	<u> </u>	Shale Density	<del></del> (		Dc Exponent		Pore P	ressure
		<del> </del>	<del></del>					<del></del>	
	<del></del>								
						<del></del>			
L		L					1		_
Dispatched Sample	s: None								
Ty	pe	<del> </del>	Inte	rval		No. of Bo	xes		Set No.
Washed & Dried	<del></del>							·	
Unwashed Ditch				<del></del>					
Unwashed Ditch GeoChem (cannot	(0303)								
Cores		No.							



#### DAILY GEOLOGICAL REPORT

VELL	NO. INIC	OK #1			_ Date	3/30/81	Time0	600	
resent Depth	10,170	Previ	ous Depth	10,170	<u>,                                    </u>	_ Footage 24 h	trs	<u>)                                     </u>	
Formation(s)									
resent Activity:									
LITHOLOGIC DESCI					-				
Interval Reported	-		Sam	pling Interv	a]	n. sa	imple Quality_	-	
Lag Time:	m	in. @	<u> </u>	_ft.					
Interval			ŗ	Description				Avg. Dril	li Rate ./ft.
Illitelian	<del>                                     </del>		<del>.</del>						
	Logs							<u> </u>	
	<del></del>	Temp.		0 <del>-10170'</del> 52-10167					
		CNL/FDC		50-10169					
	ļ	BHCS/GR	84:	50-10162					
	<del> </del>	Dip Meter CAL/EDC/G		<u>52-10160</u> 50-8452					
								<del>                                     </del>	
<del></del>		<u> </u>		<u>.</u>					
							-	<del>                                     </del>	
	Part	lon ::/ :::	locity sys	vev - ov	clic rei	se interfer	ance.	-	· · · · · · · · · · · · · · · · · · ·
	PIOD	Tew M/ A6	locity sur	vey - cy	<u> </u>	SE INCOLLOR		Ţ <u></u>	
								<del>}</del> -	
	-								
				<u> </u>				<del> </del>	
		<del></del>						<del> </del>	··· ···
·									
GAS OCCURRENC	E/SHOWS	(NONE)							
	Total Gas	Cuttings Gas	Backgrou Uni		<del></del>	CHROMATO			
INTERVAL	Units	Units	Before		c <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
	<del></del>			<u> </u>	<u> </u>	<u> </u>		+	<del> </del>
	<del>-  -  </del>								
						<u> </u>		<del> </del>	<del> </del>
				<del> </del>		<del>                                     </del>		<del>+</del>	
	-			1				_]	
Ditch Gas (Units).	NONE Background		Connec	tion		_ Trip	Peak	3	
Mud: Wt11	.7. Vis <u>44</u>	W.L19	) ph 9_	<u>5</u> cc Oil	% C	1 2 <u>2 3 K</u> Tem	oof.	, in	_ <sup>o</sup> F. out
NC	NE								
Data Unit: NC									
Depth	<del></del> ;		hale Density		<u> </u>	Exponent		Pore Pressur	e
								<del></del>	
		<u> </u>							
Dispatched Sample	none								
Ty		<del></del>	inter	rval		No. of Box	tes	Set N	lo.
Washed & Dried	<del></del>								
Univashed elitch	(Paleo)	Ţ							
Unwashed Ditch GeoChem (cannot		<del></del>							
Cores		No.		_ <del>-</del>		·			

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#### DAILY GEOLOGICAL REPORT

EL <b>t</b>	NO. INIGO	OK #1			_ Date	3/31/81	T	ime	0600	_	
esent Depth	10170	Pre	rious Depth	10170	)'	Footage 2	4 Hrs		Ω		
mation(s)											
sent Activity:								_			
HOLOGIC DESCR											
		<b>-</b>	Samı	oling Interv	·al	ft.	Sample (	Quality_			
erval Reported	п	in. @	-	ſt.			·				
									Avg. Dri	ll Rate	
Interval	<u> </u>		D	escription					min	./ft.	
	Log	e cor	mpleted	<u>.                                    </u>		<del></del> _					
	Velo	city Sur	vey complet	ed. 6:	shots						
		10	.134' Top. .096' Top	Shublik Sag Piv		<u>.</u>					
	<u> </u>	9	,500' King	ak			<u>.</u>				
		8	,400' Base ,144' Top	test zo	one						
				Kingak							
	6135										
	SW(:	SWC Shot 13, rec. 12  1 - 10098' (resetvoir core) [Sag River]									
	<del> </del>							. <u>-</u>			
	<u> </u>	3_	90071	geochem							
			<u>- 8507' _</u>	geochem					<u> </u>		
	Sec	ord Temp	Log Su	rface t	o 10.16	1'		_			
	<del>-</del>							·			
								<del></del>	<del>                                     </del>		
AS OCCURRENC	E/SHOWS	(NONE)							1		
	Total Gas	Cuttings Gas	Backgrous Unit			CHROMAT	<u> </u>				
INTERVAL	Units_	Units_	Before		Ci	C <sub>2</sub>	<del>  '</del>	3	C <sub>4</sub>	C <sub>5</sub>	
	+ +	<u> </u>				<del></del>			<u> </u>		
							$\perp$		<u> </u>	1	
			<del>  </del>			<del> </del>	+-		1	1	
										}	
	_11	<u> </u>	!		!	_1,			<u> </u>	i	
tch Gas (Units):	NONE		Canadi	ios.		Trip		Peak			
	васкуговне.	<u> </u>	Cotulect								
Aud: Wt. 11	.7 Vis 43	W.L10	.0 ph 9.3	_ cc Oil	0 %	C1 2Te	mp	of.	in	oF, out	
	F.										
Data Unit: NUNI	_										
Depth		Shale Density			De Exponent			Pore Pressure			
	<del></del>										
ispatched Samples	<b>:</b>										
	<del>-</del>				<del> · · - · · - · · · · · · · · · · · · </del>	2 No -4.0	DV#4	- 1	. Set N		
Typ Washed & Dried I			0-10170Interv 0-10170';		-10170	2 No. of B		# 1	2: #3 _	<u>.                                    </u>	
Unwashed Ditch (			<u>0-0-1/0-</u>			3			5, 16, 17	(Box	

14

<u>l: 4 cans grochem</u>

15, 16, 17 (Box No:

26, 27, 28 (Box No.

Unwashed Dirch (USGS)

GeoCliem (canned)
Cores (SWC)

8900-10,70\* 9180-10,70\* No. 4507-10098\*

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ELL N.	INIGOK #	71			Date	4-1-81	_ Time	0600	
esent Depth 10,									
rmation(s) SHU									
esent Activity:	Pulling	drill pip	e; prep_to	perf.					
THOLOGIC DESCR									
			Samn	ling Interva	,	ft. San	nole Quality	·	
terval Reported		nin. @		t.			4		
								Avg. Dr	
Interval	l		De	<del>-</del>		<u> </u>		1 min	s./fL
	Set cm	t plug 10	,000-10,170 at 8411'	.1				<del></del>	
	Squeez	<u>t retainer</u> e 94 sacks	Class G cm	t at 84	11-8561				
		<del></del>				-	<u></u>		
	<del>                                     </del>							+	
	<u> </u>					<del>-</del> .			
			· ·						
	ļ. <u>-</u>						<u>-</u>		
	<del> </del>		<u> </u>			_ <del></del>			
	<del> </del>	<del> </del>						<del> </del>	
	<u> </u>				<del>-</del>			-	
GAS OCCURRENC	Total Gas	Gas	Background Units	Г	c <sub>1</sub>	CHROMATOG	RAPH (PPM C <sub>3</sub>	<u>f)</u> C <sub>4</sub>	1 C <sub>5</sub>
INTERVAL	Units	Units	Before	Atter					<u> </u>
									1
<u> </u>	1				-				<u> </u>
					_				<del></del>
	+							1	
oitch Gas (Units):	NA Background		Connection	ıa		Trip	Peal	ks	
-	Ŧ								
Mud: Wt	Vis	W.L	ph	cc Oil	% Ci	2 Temp.	of	in	_°F, ou
Data Unit:	NA.								
Depth		S	hale Density		D	Exponent	Τ	Pore Pressui	ė
						<del> </del>	-		
<u></u>	<del></del>								
							<del></del>		
							<u> </u>		
Dispatched Samples	NONE		_						
Тур	ė		Interva	<u> </u>		No. of Boxes		Set N	lo.
Washed & Dried L	հուսի						1		
Unwashed Ditch ( Unwashed Ditch (			· · · · · · · · · · · · · · · · · · ·						
GeoChem (canne							h —		



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

#### DAILY GEOLOGICAL REPORT

ELL	NO. INIGO	K #1			Date_	4/2/81	Time	0600			
<del></del>		Pre									
mation(s)	Shublik			т	`op	10,134' (	log) (PB 8	411')			
sent Activity:	DST #1 (F	inal Shutin	)								
HOLOGIC D	ESCRIPTION										
erval Reporte	d	min. @	Sa	mpling Inter	val	ft.	Sample Quality				
g Time:		min. @		ft.							
Interval				Description					ill Rate n./ft.		
10001721	P	Description Perforate 8330-8360'; 8257-8307', 4 shots/ft. Packer									
	a	t 8195'.					· · · · · · · · · · · · · · · · · · ·	<u> </u>			
		ST #1:									
	_	IFP 31 min.									
		ISIP 60 min.									
		Initial Open: Mod blow on initial opening increasing to									
		strong blow off htm of bucket.									
	F	Final Open: Strong blow increasing to 50 psi after 60									
		min on 1/8" choke; decline to 13 psi at end of period.  Gas to surface at 52 min. final open. Reversed out 310'									
	- 1	gas cut mud. 5 gas samples									
		5 gas samples 4 gas cut mud samples . Cl2 20K									
	F	Final close in 0130 hrs. Will run to 0930.									
				_			<del></del>	<del> </del>			
AE OCCUBE	TENCE (CHOW)						<u>-</u>				
IAS OCCORR	RENCE/SHOW: Total	Cuttings	Backgro			CHROMATO	OGRAPH (PPN	<u>()</u>			
INTERV	Gas AL Units		Un Before		c <sub>1</sub>	C <sub>2</sub>	C3	C <sub>4</sub>	C <sub>5</sub>		
		<del> </del>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<del> </del>	-	1		
									1		
			<u> </u>	1			<u> </u>		<del> </del>		
		1	1	i	i	· <del>1</del>			<del></del>		
itch Gas (Unit	<u>ts):</u> Backgrou	nd	Connec	tion		. Trip	Pea	ر د ــــــــــــــــــــــــــــــــــــ	_		
	17	42 10	5.05	<b></b>		22000	0=		0.00		
<u>dud:</u> Wt	11.5 Vis	42 W.I. 10	ph	cc Ou	%C1	2 iem	ıp,°r	. и	_~r. out		
Data Unit:											
		т		D	c Exponent	Pore Pressur	e				
De	pth		Shale Density								
De	pth				<u>.</u>						
De	pth										
De	pth										
De	pth										
			Inte	rval		No. of Bo	xes	Set N	0.		
hispatched Sar Washed & Dr	mples:  Type ried Ditch			rval		No. of Bo	xcs	Set N	0.		
Dispatched Sar Washed & Dr Unwashed D	mples:  Type ried Ditch itch (Palco)			rval		No. of Bo	xes	Set N	0.		
Dispatched Sar Washed & Dr	Type ried Ditch itch (Paleo)			rval		No. of Bo	xes	Set N	о.		

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VELL									
resent Depth1	0,170'	Prev	ious Depth	(10,170')	PBD 81	44   Footage 24	Hrs.	<del>-</del>	<del></del>
Formation(s)S	hublik			т	ор	10.134' (1	log)		
Present Activity:	Circulatine	g out gas-	cut mud,_				<u> </u>		
LITHOLOGIC DESC									
			Sar	npling Interv	al	ft. S	ample Quality_		
Interval Reported Lag Time:		ուտ. @		ft. ~					
Interval				Description				Avg. Dri	ill Rate n./ft.
	DST	#1 (S		<del></del>					<del>-</del>
	Set	cmt retai	iner 8192.						
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						<u> </u>			
				<del></del>	···	<u> </u>	<del></del>		
									<u> </u>
	-							<del> </del>	
									·· · · -
GAS OCCURREN	CE/SHOWS Total	N/A Cuttings	Backgro	und Gas		CHROMATO	GRAPH (PPM)		
INTERVAL	Gas Units	Gas Units	Un Before		C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>
				1210					<b>_</b>
<u></u>	-			<del>                                     </del>		<u> </u>		<del> </del>	<u> </u>
								1	
						<u> </u>			
		<u></u> _				<u> </u>	<u> </u>	<u> </u>	1
Ditch Gas (Units):	N/A					<b></b>	D1-		
	Background		Connec	tion		Trip	reaks		
Mud: Wt	Vis	w.L	ph	cc Oil	% C	l <sub>2</sub> Tem	p,of,	in	_oF. out
Data Unit: N/2									
Depth		S	shale Density		<u>r</u>	c Exponent		Pore Pressur	·e
	;	<del></del>							·
	·					· · · · · · · · · · · · · · · · · · ·		<del></del>	
Dispatched Sample	es:								
Ту	pe		Inte	rval		No. of Box	cs	Set N	io.
Washed & Dried					.				
Unwashed Ditch Unwashed Ditch	(USGS)								
GeoChem (cann Cores	ed)	No.			-+				
1 4 (1)(1)		140.					<del></del>	···-	

NOPRIS PEQUIST

NO FINAL PEPORT