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

4

DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 2-12-81 Time 0600

Present Depth 107' Previous Depth 107' Footage 24 Hrs. 0

Formation(s) QUATERNARY (?) Top Surface

Present Activity: Weld diverter line - anticipate spud AM today.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	REQUEST: 1. All report and spl description forms, i.e. Daily Reports, DST, % Spl Description, etc.	
	2. Desk Lamp	
	3. Dry spl bxs - 30"	
	4. Can clips	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
[illegible] (canned)			
[illegible]	No		

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2-13-81 Time 0600

Present Depth 405' Previous Depth 107' Footage 24 Hrs. 298'

Formation(s) Nanushuk Top Surface

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 150-390 Sampling Interval 30 ft. Sample Quality FAIR
Lag Time: 8 min. @ 400 ft.

Interval	Description	Avg. Drill Rate min./ft.
150-210	Clyst: lt gy, sft, gummy, bent., w/thin liq. lenses	0.2
210-270	Ss: wh, v f - f grn, sft, uncons., qtzs, becoming lt grn - gy - dk gy, SA, mod. w srt; intbdd w/ clyst: a/a	0.2
270-330	Pred SS: a/a; w/ intbdd clyst: a/a	0.4
330-390	Pred clyst: lt gy-tan, sft, bent., gummy; w/ thin ss & sltst; tr liq.	0.4
	Request: 1) all Sample Froms, etc.	
	2) Temp. Data Sheet (USGS)	
	3) Velocity Survey Plates	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background 0 Connection 0 Trip - Peaks None

Mud: Wt. 9.1 Vis 38 W.L. NC ph NC cc Oil 0 % Cl_2 NC Temp. 53 °F. in 54 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
200	NR	0.89	8.7
300	NR	0.82	8.7
400	NR	0.87	8.7

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2-14-81 Time 0600

Present Depth 1279' Previous Depth 405' Footage 24 Hrs. 874'

Formation(s) Nanushuk Top Surface

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 390-1260 Sampling Interval 30 ft. Sample Quality Fair-Good
Lag Time: 26 min. @ 1200 ft.

Interval	Description	Avg. Drill Rate min./ft.
390-540	Pred clyst, m-grnd, lt-gy to m-gy, sft, bent, carb, in part slty w/local thn bds sltst; sltst is lt gy, sft & ss is brn, f-m grnd, p consolidated w/occ sm pbls to 4 mm & whole and frag plcy shells	0.9
540-600	Clyst as above w/com liq & mnr liq brn sh	0.9
600-870	Pred clyst, lt gy, sft, gummy, bent & carb, mnr thn bds ss; ss is lt gy, f-grn, qtzs, uncons; col are wh, clr, lt gy, gn; SA; NSOCF; sltst, m-gy, sft, arg w/rare pbls & occ shell frags..	0.8 (0.3 to 3.5)
870-900	Ss, lt gy, v f - to f grnd, p consolidated, SA, qtz; col is clr, wh, lt gy, gn w/NSOCF	0.8
900-1110	Pred clyst as abv, occ slty, w/ local strgs sltst & ss as abv.	0.9
1110-1170	Lith change; ss, lt gy, v f - f grnd becoming hd to w cmt w/calc cmt, sub ang, qtz; col are wh, clr, lt gy, dk gy, gn; ft, carb in part w/cly fill; NSOCF; intbd w/calc sltst & lt gy arg ls, tr wh firm cly	1.0

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
1120 (1st Indication)									
1215 (max)	20	-	15	15	1800	-	-	-	-

Ditch Gas (Units): Background 15 Connection None Trip None Peaks None

Mud: Wt. 9.5 Vis n/c W.L. n/c ph n/c cc Oil n/c % Cl_2 n/c Temp. 54 °F. in 54 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
500	-	.92	8.7
700	-	.87	8.7
900	-	.92	8.7
1100	-	1.01	8.7
1200	-	1.00	8.7

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
Geochem (canned)			
	No		

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

DAILY GEOLOGICAL REPORT

L NO. INIGOK #1 Date 2/14/81 Time 0600

nt Depth ____ Previous Depth ____ Footage 24 Hrs. ____

ation(s) ____ Top ____

nt Activity: ____

IOLOGIC DESCRIPTION

val Reported ____ Sampling Interval ____ ft. Sample Quality ____
Time: ____ min. @ ____ ft.

Interval	Description	Avg. Drill Rate min./ft.
1170-1260	Pred sltst, lt gy, m hd, carb, calc in part; sft non-calc. w/min ss as abv & sh, lt gy, sft, sl slty, carb.	1.0
	REQUEST: Dry Ditch Sample boxes	
	Card table w/hard surface.	

S OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

h Gas (Units): Background ____ Connection ____ Trip ____ Peaks ____

id: Wt. ____ Vis ____ W.L. ____ ph ____ cc Oil ____ % Cl_2 ____ Temp. ____ °F. in ____ °F. out

ta Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure

patched Samples:

Type	Interval	No. of Boxes	Set No.
ashed & Dried Ditch			
nwashed Ditch (Paleo)			
nwashed Ditch (USGS)			
Chem. (canned)			
	No		

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

DAILY GEOLOGICAL REPORT

ELL NO. INIGOK #1 Date 2/15/81 Time 0600

sent Depth 1997' Previous Depth 1279' Footage 24 Hrs. 718'

rmation(s) Nanushuk Top Surface

sent Activity: Presently drilling.

THOLOGIC DESCRIPTION

erval Reported 1260-1980 Sampling Interval 30 ft. Sample Quality Fair to Good
Time: 54 min. @ 2000 ft.

Interval	Description	Avg. Drill Rate min./ft.
1260-1380	Pred sltst, lt gy, m-hd, calc, carb, intbd w/clyst, m-grn, firm, in pt sl calc, w/ss, lt gy, f - grn, hd, arg, SA, calc cmt, tt, NSOCF.	0.9 (0.4 - 1.7)
1380-1440	Pred clyst, lt gy to m - gy, firm to sft, sl slty, carb, w/min bds sltst as above & ss as above, occ whole shells & shell (Plcy) frags	0.9
1440-1500	Sltst, lt gy, firm, carb, sl mic, w/intbd ss, ss is lt gy, v f - f grn, hd, calc, arg, tt, NSOCF	1.3
1500-1590	Clyst, cream, firm, sl carb.	0.7
1590-1650	Pred. clyst, cream to lt gy, firm, occ slty, w/min gy to brn, firm, sub-fis sh	0.5 (0.2 to 0.9)
1650-1860	Intb sltst, lt gy, firm, arg; ss, lt gy, v f - f grn, firm, highly arg, qtzs, grns clear, wh, gn, carb, in pt hd w/calc cmt; clyst, lt gy, m-gy & cream, firm, sl carb; sh, gy to brn, firm, sub-fis, w/occ tr calc, tr pyr, rare shell frags.	0.7
1860 -1980	Pred clyst as above w/min sltst & ss as above	0.5

S OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
1920	45	NC	10	10	4000	-	-	-	-

Gas (Units): Background 10 Connection - Trip 45 @ 1341' Peaks 23 @ 1640, 45 @ 1920

Wt. 9.6 Vis 35 W.L. NC ph 10.5 cc Oil - % Cl_2 NC Temp. 56 °F. in 58 °F. out

Unit: max trip temp = 55°

Depth	Shale Density	Dc Exponent	Pore Pressure
1300	NC	1.01	9.0
1500	NC	.98	9.0
1700	NC	.97	9.0
1900	NC	1.06	9.0

ched Samples:

Type	Interval	No. of Boxes	Set No.
ed & Dried Ditch			
ashed Ditch (Paleo)	120-930	1	-
ashed Ditch (USGS)	120-930	1	-
Chem (canned)	120-1200	2	-
s	No.		

st

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2/16/81 Time 0600

Present Depth 2600' Previous Depth 1997' Footage 24 Hrs. 603

Formation(s) Nanushuk Top Surface

Present Activity: Tripping to clean up hole.

LITHOLOGIC DESCRIPTION

Interval Reported 1980-2600 Sampling Interval 30 ft. Sample Quality Good to 2340'
NS 2340-2400'
Lag Time: 70 min. @ 2600 ft. Poor 2400-2600'

Interval	Description	Avg. Drill Rate min./ft.
1980-2040	Pred clyst, lt gy to m gy, cream, firm, tr calc w/thn bds sltst & ss	0.8
2040-2070	Lig, coal & lig sh	0.6
2070-2280	Pred ss, tan to wh, f to m grn, m - hd, calc cmt, SA, SR, tt, qtz; grns are clr, gn, wh & brn; also ss in pt, lt gy, firm, sl calc, micromicac and clyst as abv; tr fos wood; tr amber; few pbls; tr tan dol.	1.0 (0.4 - 1.2)
2280-2340	Clyst as abv w/intbd ss; ss is lt gy, tan, f - m grn, m - hd, dol cmt, tt, NSOCF	1.2
2340-2400	No sample (probably result of clay member going into solution or mudball preventing return)	1.1
2400-2600	Very poor sample, probably for same reason as 2340-2400.	1.2
	REQUEST: box 1 qt. Geochem cans w/lids & Geochem labels.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
2245	45	NC	8	5	7800	-	-	-	-

Ditch Gas (Units): Background 10 Connection Nil Trip - Peaks 30 @ 2070
45 @ 2245

Mud: Wt. 9.8 Vis 33 W.L. NC ph 10.5 cc Oil NC % Cl_2 NC Temp. 60 °F. in 62 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
2000	2.22	1.0	9.0
2200	2.24	1.1	9.0
2400	2.25	1.05	9.0
2600	2.25	1.09	9.0

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)	930-2600	2	2 & 3
Unwashed Ditch (USGS)	930-2600	2	2 & 3
GeoChem (canned)	1980-2280	3	2 & 3
Cores	No		

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

DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 2/17/81 Time 0600

Present Depth 2600' Previous Depth 2600' Footage 24 Hrs. -

Formation(s) Nanushuk Top Surface

Present Activity: Running Schlumberger Logs.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Made wiper trip after 1st attempt to run logging tool; then ran okay.	
	Logging: Run #1 - DIL/SFL/SP/GR, 2592-27 logged interval	
	Run #2 - Running LS/BHCS/GR	
	Loggers TD: 2598 Drillers TD: 2600	
	NOTE: Sidewall coring program abandoned due to poor hole conditions.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem: (canned)			
Cores	No.		

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

DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 2-18-81 Time 0600

Present Depth 2600' Previous Depth - Footage 24 Hrs. -

Formation(s) NANUSHUK Top Surface

Present Activity: Preparing to run casing

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Logs: Run #2 - Long Spaced BHC sonic (Mis-run)	
	Run #3 - BHC/GR, 2592'-112'	
	Run #4 - Long Spaced BHC Sonic, 2586'-112'	
	Run #5 - FDC/CNL/GR/Caliber, 2597'-112'	
	Run #6 - Dipmeter, 2597'-112'	
	Run #7 - Sidewall Cores, 314-2562, Shot 30, Recovered 28	
	Approx. 200' clean ss in section w/density por of 20-27%; Rt. value on most ss is 4-5 ohms (indicates H_2O)	
	NOTE: Sidewall coring program attempted after reviewing CNL logs (was previously abandoned because of apparent poor hole conditions).	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2/19/81 Time 0600

Present Depth 2600' Previous Depth - Footage 24 Hrs. -

Formation(s) Nanushuk Top

Present Activity: Circulating 13-3/8" Casing @ 2594+

LITHOLOGIC DESCRIPTION

Interval Reported Sampling Interval ft. Sample Quality
Lag Time: min. @ ft.

Interval	Description	Avg. Drill Rate min./ft.
	NEED: Sidewall Core Description Forms.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background Connection Trip Peaks

Mud: Wt. Vis W.L. ph cc Oil % Cl_2 Temp. °F. in °F. 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 (USGS			

TETRA TECH, INC.

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2-20-81 Time 0600

Present Depth 2600' Previous Depth _____ Footage 24 Hrs. _____

Formation(s) Nanushuk Top _____

Present Activity: Nippling up BOP.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	NOTE: Estimate drilling ahead Sunday, 2-22-81.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
[illegible]Chem (canned)			
[illegible]	No		

[illegible]

N - 6

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2-21-81 Time 0600

Present Depth 2600' Previous Depth - Footage 24 Hrs. -

Formation(s) Nanushuk Top Surface

Present Activity: Nippling up BOP, preparing to test same.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	NOTE: Present estimate for resuming drilling is this afternoon (2-21-81)	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units). Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
Other Samples			

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2/22/81 Time 0600

Present Depth 2605' Previous Depth 2600' Footage 24 Hrs. 5

Formation(s) Nanushuk Top Surface

Present Activity: Building mud volume.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	NOTE: Re-entered hole, drilled cement plug, suspended drilling operations until tanks cleaned & mud rebuilt.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2/24/81 Time 0600

Present Depth 4022' Previous Depth 3015' Footage 24 Hrs. 1007'

Formation(s) Nanushuk / Torok Top Torok Top: 3820 (tentative)

Present Activity: Tripping out for core barrel

LITHOLOGIC DESCRIPTION

Interval Reported 3000-4020 Sampling Interval 20 ft. Sample Quality Fair
Lag Time: 43 min. @ 4000 ft.

Interval	Description	Avg. Drill Rate min./ft.
3000-3140	Intbd sltst, lt gy, firm, hi arg; ss, lt gy, v f - f grn to slty, firm, fri, p srtd, arg, carb, w/local tr dead oil stn, sl por, no show; clyst, lt gy, sft, soluble, w/com pyr & pt pyr Inoceramus	0.8
3140-3220	Pred sltst as abv, intbd w/clyst as abv	0.75
3220-3440	Sltst as abv, locally calc, & in pt grdg to ss, lt gy, v f - f grn, firm, arg, sl calc, carb, qtz, grns cl, wh, lt gy, SA-SR; intbd w/clyst, lt gy, sft, w/tr s qtz & cht pebs, com pyr chunks	1.1 (0.6-1.4)
3440-3540	Pred clyst as abv, intbd w/sltst as abv, w/tr - 20% ls, brn, hd, sdy	1.1
3540-3580	Redbed, rthy, slty, sft, carb, intbd w/ss, lt gy, slty-f grn, p sort, arg, sl calc, carb, sl por, no show	1.1
3580-3820	Intbd sequence of sltst, ss & min clyst as abv, no show	1.2
3820-3860	Redbeds, rthy, red, slty, carb, intbd w/ss, lt gy, v f - f grn, firm, p sort, arg; sltst, lt gy, firm, hi arg, carb	1.3
3860-3920	Intbd sltst & clyst as abv	1.2
3920-4022	Clyst, lt gy & gy-brn, sft, carb, sl lam, sl sol	1.2

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
3055-85	15	-	10	10	5000	-	-	-	-
3750-60	10	-	5	5	2500	100	100	50	-
			NOTE: 3750-60 is 1st sign of heavies						

Ditch Gas (Units): Background 5 Connection None Trip NA Peaks 15 @ 3080'

Mud: Wt. 9.5 Vis 34 W.L. 12 ph 10.5 cc Oil - % Cl_2 600 Temp. 82 °F. in 84 °F. out
Max Trip Temp: 51

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
3500	-	1.29	
3600	2.38	1.32	
3700	2.44	1.35	
3800	2.34	1.33	
3900	2.32	1.26	
4000	2.36	1.34	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch	120-3000	2	1 & 2 (box #1
Unwashed Ditch (Paleo)	2600-3400	1	4
Unwashed Ditch (USGS)	2600-3400	-	4
GeoChem (canned	2280-3620	3	7,8
Cores			

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2/25/81 Time 0600

Present Depth 4185' Previous Depth 4022' Footage 24 Hrs. 163'

Formation(s) Torok Top 3820'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 4020-4140' Sampling Interval 20' ft. Sample Quality Poor
Lag Time: 43 min. @ 4100 ft. 10' from 4160

Interval	Description	Avg. Drill Rate min./ft.
4022-4036.5	Core #1: Cut 14.5, recovered 14.5, 100%: m gy clyst w/com lt gy sltst, lams @ top becoming more widely spaced below 4025'; carb frags, low angle dips approx 8°.	9.0
4036.5-4120	Clyst, lt gy, sft, soluble in pt, w/sltst lams & finely dis carbon	2.0
4120-4140	Redbed, pk-red, slty, carb, rthy, sl calc	1.5

GAS OCCURRENCE/SHOWS (NONE)

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background 5 Connection 10/5 @ 4115 Trip 25 @ 4037 Peaks 7 @ 4055

Mud: Wt. 9.6 Vis 36 W.L. 10.8 ph 11 cc Oil - % Cl_2 650 Temp. 75 °F. in 76 °F. out
Max trip temp 88 @ 4037'

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
4000	2.36	1.34	-
4100	2.32	1.38	-
4023 (core)	2.34	-	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Petro)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No. 1 (4022-4036.5)	5	-

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

DAILY GEOLOGICAL REPORT

ELL NO. INIGOK #1 Date 2/26/81 Time 0600

esent Depth 5071' Previous Depth 4185' Footage 24 Hrs. 886'

ormation(s) Torok Top 3820'

esent Activity: Tripping for new bit; bit pulled tight.

THOLOGIC DESCRIPTION

terval Reported 4140-5040 Sampling Interval 10' & 20' ft. Sample Quality Fair-Poor
g Time: 61 min. @ 5000 ft.

Interval	Description	Avg. Drill Rate min./ft.
4140-4720	Clyst & sh, intergradational, lt gy, m gy & gy-brn, sft - firm, carb, w/occ sltst strgs & lams	1.2
4720-4820	Sh & clyst as abv, w/increase in sltst, sltst is lt gy, firm, carb	1.1
4820-5040	Pred sh & clyst as abv w/thn ss & sltst strgs, ss is lt gy, v f grn, firm, S & P, carb, NSOCF; sltst is lt gy, firm, carb	1.2
	REQUEST: Several sheets plastic film base for graphic well log. Dry sample boxes. 1 box Geochem cans & lids.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
4525-50	10	-	5	7	2000	100	tr	tr	-

Ditch Gas (Units): Background 5 Connection nil Trip NA Peaks 10 @ 4550

Mud: Wt. 9.7 Vis 36 W.L. 9.8 ph 11.0 cc Oil NC % Cl_2 600 Temp. 83 °F. in 84 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
4500	2.31	1.37	
4600	2.33	1.40	
4700	2.32	1.43	
4800	2.33	1.44	
4900	2.33	1.49	
5000	2.27	1.55	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch	3000-4606	2 (box #2)	1 & 2
Unwashed Ditch (Tetra Tech)	3400-4180	1 (box #5)	
Unwashed Ditch (USGS)	3400-4180	1 (box #5)	
GeoChem (canned)	3620-4380	2 (box #11 & #12)	
Core:	No		

TETRA TECH, INC.

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2/27/81 Time 0600

Present Depth 5722' Previous Depth 5071' Footage 24 Hrs. 651'

Formation(s) Torok Top 3820'

Present Activity: Drilling, preparing to make trip

LITHOLOGIC DESCRIPTION

Interval Reported 5040-5660 Sampling Interval 20 ft. Sample Quality Fair
Lag Time: 68 min. @ 5650 ft.

Interval	Description	Avg. Drill Rate min./ft.
5040-5100	Sh, m gy, firm, slty, carb w/occ lt gy sltst lams	1.2
5100-5300	Sh, lt gy - m gy, firm, sl slty, w/occ lt gy sltst strgs, occ lt brn cast	1.2
5300-5480	Sh, m gy - lt gy, firm, becoming incr plty to splty, becoming micromicac, less carbon	1.25
5480-5500	Ss, lt gy to wh, m hd, w cmt, sil, arg, ang - SA, qtz, cl, wh, tan, carb, tr, NSOCF	1.2
5500-5660	Sh, lt gy, m gy, firm, flky to plty, micromicac, sl carb, w/occ sltst lams	1.3

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
5600	5	-	5	5	1500	tr	tr	-	-

Ditch Gas (Units): Background 5 Connection nil Trip 27 @ 5071 Peaks nil

Mud: Wt. 9.7 Vis 37 W.L 9.6 ph 11.0 cc Oil NC % Cl_2 650 Temp. 78 °F. in 81 °F. out
Max trip temp 84° @ 5071

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
5100	2.27	1.59	
5200	2.25	1.58	
5300	2.30	1.55	
5400	2.38	1.53	
5500	2.37	1.57	
5600	2.32	1.56	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)	4180-4900	1 (Box #6)	
Unwashed Ditch (USGS)	4180-4900	1 (Box #6)	
GeoChem (canned)	4380-5340	2 (Boxs #12, #13)	
Cores	No.		

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 2/28/81 Time 0600

Present Depth 6346' Previous Depth 5722' Footage 24 Hrs. 624'

Formation(s) Torok Top 3920' (revised)

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 5660-6280 Sampling Interval 20'-10' ft. Sample Quality Fair
Lag Time: 74 min. @ 6300 ft. from 5760'

Interval	Description	Avg. Drill Rate min./ft.
5660-5820	Sh, m gy, lt gy, dk gy, firm, carb, flky - plty, mica, w/ tr pyr & occ sltst lams	1.3
5820-5850	Sltst, lt gy, m hd, arg, carb, intbd w/sh as abv	1.2
5850-5910	Pred sh as abv w/ intbd sltst & ss, ss is lt gy - wh, v f grn, m hd, sil, sl calc, qtz, cl, wh, SA - SR, tt, NSOCF	1.2
5910-5980	Ss as abv, tt, occ arg, w/ local dead oil stn, no cut, no flour; intbd w/ sh, gy - brn, m gy, firm, carb, mica, plty & w/com lse m-- crs grns, SA - ang qtz & cht grns	1.3
5980-6090	Pred sh, m gy, lt gy & gy-brn, firm, mica, carb, plty - splty, w/ sltst, intbd w/ ss, lt gy, v f g, firm - m hd, arg, sil, dol, qtz, cl, wh, lt gy, tr trip cht, m - w srtd, SA - SR, tt to sl por, NSOCF	1.3
6090-6140	Sltst, lt gy, arg, firm, sl calc, grdg in pt to ss as abv, intbd w/ sh, m gy, firm, slty, carb	1.25
6140-6210	Pred sh, m gy, firm, slty, carb, plty, intbd sltst & ss as abv, no shows	1.1
6210-6280	Sh, m gy, firm, in pt slty, sl carb, non-calc, plty, w/occ sltst stgs	1.1
	REQUEST: Wet Ditch Sample Boxes (10" x 10" x 10")	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
5700-5720	10	NC	8	5	2000	100	100	tr	tr

Ditch Gas (Units): Background 3 Connection nil Trip 15 @ 5775' Peaks 10 @ 5700'

Mud: Wt. 9.8 Vis 38 W.L. 9.6 ph 11.0 cc Oil NC % Cl_2 650 Temp. 86 °F. in 88 °F. out
Max trip temp.: 83

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
5700	2.35	1.56	
5800	2.36	1.50	
5900	2.34	1.53	
6000	2.27	1.55	
6100	2.32	1.50	
6200	2.35	1.45	
6300	-	1.50	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)	4900-5700	1 (Box #7)	
Unwashed Ditch (USGS)	4900-5700	1 (Box #7)	
GeoChem (canned)	5340-5800	1 (Box #14)	
Cores	No.		

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/1/81 Time 0600

Present Depth 6470' Previous Depth 6346' Footage 24 Hrs. 124'

Formation(s) Torok Top 3920'

Present Activity: Running in w/new bit

LITHOLOGIC DESCRIPTION

Interval Reported 6280-6450 Sampling Interval 10 ft. Sample Quality Fair
Lag Time: 75 min. @ 6450 ft.

Interval	Description	Avg. Drill Rate min./ft.
6280-6370	Pred sh, m gy, firm, sl carb, sl mica, non-calc, in pt slty w/occ sltst bds, lt gy, firm, in pt grdg to v f slty ss, tt, no show	1.2
6370-6390	Ss, lt gy, v f grn, m hd, fri, arg, qtz, cl to wh w/ some trip cht, SA, tt to sl por, NSOCF, intbd w/sh & sltst as abv	1.1
6390-6450	Pred sh as abv w/occ sltst & ss strgs, no shows	1.3
	Cut Core #2: 6454-6470 (no recovery)	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
6340-50	15	NC	10	10	1800	300	500	500	400

Ditch Gas (Units): Background 5 Connection 45 @ 6393, 20 @ 6424 Trip 25 @ 6454 Peaks 15 @ 6430

Mud: Wt. 9.8 Vis 34 W.L. 9.5 ph 9.0 cc Oil NC % Cl_2 650 Temp. 83 °F. in 86 °F. out
Max trip temp: 97

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
6400	2.33	1.49	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)	5700-6300	Box #5	
Unwashed Ditch (USGS)	5700-6300	Box #6	
GeoChem (canned)	5800-6160	Box #15	
Cores	No.		

Geologist: DAVE YOUNG

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/2/81 Time 0600

Present Depth 6852' Previous Depth 6470' Footage 24 Hrs. 382'

Formation(s) Torok Top 3920'

Present Activity: Pick up Core Barrel

LITHOLOGIC DESCRIPTION

Interval Reported 6450-6852 Sampling Interval 10 ft. Sample Quality Fair
Lag Time: 80 min. @ 6850 ft.

Interval	Description	Avg. Drill Rate min./ft.
6450-6510	Pred sh, m gy, lt gy, firm, mica, carb, w/ thn sltst & ss lams	1.2
	NOTE: Cut core #2 @ 6454-6470 (no recovery); drlg rate was 10 min/ft.	
6510-6620	Pred sh as abv w/ intbd sltst, lt gy, firm, arg, carb, & ss, lt gy, v f grn to slty, hd, sil, carb, SR, qtz, cl, wh & tan, tr trip cht, tt, NSOCF	1.3
6620-6650	Ss, lt gy, v f grn - slty, firm, arg, p srtd, carb, SA-SR qtz, cl, wh & tan, tr dead oil stn, no cut, no flour, sl por to tt; intbd w/sh as abv & in pt grds to sltst	1.2
6650-6700	Pred sh, m gy, dk gy, firm, carb, non-calc, mica, in pt slty, plty - splty w/ intbd sltst, lt gy, firm, arg & ss as abv	1.7
6700-6770	Pred sh, lt gy & m gy, firm, becoming hi mica, in pt sub - metallic, splty - plty, & intbd w/ sltst, lt gy, firm, m hd, arg, in pt sil, in pt grdg to slty ss; & ss, lt gy, v f grn - slty, m hd, sil, sl arg w/ trip cht, carb, & w/	2.2

(CONT. ON PAGE #2)

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
6665-6710	30	NC	25	20	2800	800	100	600	300

Ditch Gas (Units): Background 20 Connection 35 (average) Trip 55 @ 6470' Peaks 30 (6665-6710)
max conn 50 @ 6676'

Mud: Wt. 9.8 Vis 33 W.L. 9.7 ph 9.0 cc Oil NC % Cl_2 500 Temp. 87 °F. in 90 °F. out
max trip temp.: 86

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
6500	2.38	1.46	
6600	2.36	1.53	
6700	2.38	1.64	
6800	2.36	1.62	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist DAVE YOUNG

TETRA TECH, INC.

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

DAILY GEOLOGICAL REPORT

WELL NO: INIGOK #1 Date 3/2/81 Time 0600

Present Depth _____ Previous Depth _____ Footage 24 Hrs. _____

Formation(s) _____ Top _____

Present Activity: _____

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	tr dead oil stn, tt, no cut, no flour, tr pyr, tr ls	
6770-6852	Pred sh, becoming dk gy & m gy, m hd - firm, sl carb, sl mica, splty w/ thn intbd sltst & ss as abv	2.3
	REQUEST: Bundle of 10" x 10" x 10" wet sample boxes One roll drafting tape	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/3/81 Time 0600

Present Depth 6950' Previous Depth 6852' Footage 24 Hrs. 98'

Formation(s) Torok (BOTTOMSET BEDS: TENTATIVE) Top 3920' (6830)

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 6852-6920 Sampling Interval 10 ft. Sample Quality Fair-Good
Lag Time: 80 min. @ 6850 ft.

Interval	Description	Avg. Drill Rate min./ft.
6852-6867	Core #3: Cut 15', 100% recovery; sh, dk gy, hd, carb, mica, pyr, w/ com sltst strgs, lam & micro-lams; sltst, lt gy, sl calc, some slump features, w/ micro-xbdg, low dips of 5°-10°, fr to p quality dips, no frac, tr bleeding gas, no odor, not cut, no flour.	12.0
6867-6920	Sh, dk gy & m gy, m hd, w/ thn sltst strgs, tr pyr, tr mica	3.2

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
6880-90	10	NC	10	10	1200	200	200	200	200

Ditch Gas (Units): Background 10 Connection 15 Trip 80 @ 6867' Peaks None

Mud: Wt. 9.7 Vis 33 W.L. 11.0 ph 9.0 cc Oil NC % Cl_2 500 Temp. 85 °F. in 87 °F. out
Max trip temp: 90°.

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
6900	2.45	1.71	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)	6300-6850	9	
Unwashed Ditch (USGS)	[illegible]-6850	9	
GeoChem (canned)	[illegible]-6852	2 (bxs 16 & 17)	
Cores	No. 3 (6852-6867)	5	

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/4/81 Time 0600

Present Depth 7314' Previous Depth 6950' Footage 24 Hrs. 364'

Formation(s) Torok (Bottomset) Top 6974'

Present Activity: Tripping for new bit

LITHOLOGIC DESCRIPTION

Interval Reported 6950-7314 Sampling Interval 10' ft. Sample Quality Good
Lag Time: 85 min. @ 7300 ft.

Interval	Description	Avg. Drill Rate min./ft.
6950-6974	Sh, dk - m gy, w/ sltst, gy, shy, tt strs	3.2
6974-6985	Ss, lt gy, v f grn; sltst, p srtd, arg, tt, 300 units gas	1.8
6985-7080	Sh as abv (6950-6974)	3.1
7080-7098	Ss & sltst as abv, 80 units gas	2.2
7098-7144	Sh as abv (6950-6974)	2.5
7144-7151	Ss & sh as abv, 100 units gas	2.1
7151-7180	Sh as abv (7144-7151)	2.5
7180-7236	Ss, lt gy, v f grn to sltst, p srtd, arg, tt, w/ sh, dk gy, satiny strs, dull grn-yel flour, milky cut on crush, 180 units gas @ 7185, 225 units @ 7215	1.8
7236-7275	Sh, dk gy, satiny, w/ sltst, lt gy, p srtd, arg, tt strs in sh	3.2
7275-7285	Ss as abv (7180-7236), 275 units gas	1.8
7285-7314	Sltst & sh as abv (7236-7275)	3.4

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
6970-7005	300	NC	30	40	2800	7500	7500	5000	1500
7225-7240	275	NC	75	100	2200	4000	5000	5000	1500

Ditch Gas (Units): Background 100 Connection 150 @ 7303 Trip 45 Peaks 300 @ 6980

Mud: Wt. 10.2 Vis 41 W.L. 11.2 ph 9.0 cc Oil - % Cl_2 500 Temp. 102 °F. in 104 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
7000	2.42	1.57	
7100	2.44	1.56	
7200	2.52	1.56	
7300	2.49	1.67	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist NORRIS REQUIST

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/5/81 Time 0600

Present Depth 7490' Previous Depth 7314' Footage 24 Hrs. 176'

Formation(s) Pebble Shale Top 7471' (cuttings)

Present Activity: Coring (Core #4) @ 7490; top core @ 7488'

LITHOLOGIC DESCRIPTION

Interval Reported 7314-7488 Sampling Interval 10' ft. Sample Quality Fair
Lag Time: 88 min. @ 7450 ft.

Interval	Description	Avg. Drill Rate min./ft.
7314-7328	Sh, dk gy, sm	2.3
7328-7338	Sltst, gy, p srtd, shy, mica	1.4
7338-7471	Sh, dk gy, sm, w/ sltst, gy, p srtd, shy, mica strs & lams	2.2
7471-7488	Sh, v dk brn, sft, flky, splty, tr - 10% tuff, tan to buff, sm	2.6

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
7320-85	250	-	100	125	2200	400	600	500	1700

Ditch Gas (Units): Background 120 Connection 135 @ 7430' Trip 175 @ 7314' Peaks 250 units @ 733'

Mud: Wt. 10.4 Vis 65 W.L. 8.6 ph 9.0 cc Oil - % Cl_2 500 Temp. 85 °F. in 88 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
7400	2.48	1.56	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)	6850-7220	1 (Box #10)	
Unwashed Ditch (USGS)	6850-7220	1 (Box #10)	
GeoChem (canned)	6852-7120	1 (Box #18)	
Cores	No.		

N-63

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

DAILY GEOLOGICAL REPORT

WELL N. INIGOK #1 Date 3-6-81 Time 0600

Present Depth 7706' Previous Depth 7490' Footage 24 Hrs. 216'

Formation(s) KINGAK SH Top 7648'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 7488-7670' Sampling Interval 10 ft. Sample Quality fair
Lag Time: 90 min. @ 7650 ft.

Interval	Description	Avg. Drill Rate min./ft.
7488-7506'	Core #4, Cut 18', Rec. 18' - jammed. Sh, v. dk brn, flky, splty, carb, w/m Ss "pbls", occ Sh, dk gy, smooth strks, occ thn pyr strks.	17.0
7506-7648'	Sh: v. dk brn, flky, splty, same description as core, carb, m - crs Ss size "pbls", tr of pyr.	1.8
7648-7670'	Sh: v. dk brn gy, smooth splty.	3.1

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
7550-7590'	75	No	50	55	10,000	1200	1600	1500	600

Ditch Gas (Units): Background 60 Connection 75 Trip 140 Peaks 75 @ 7570'

Mud: Wt. 10.5 Vis 61 W.L. 6.2 ph 9.0 cc Oil 0 % Cl_2 500 Temp. 96 °F. in 98 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
7500'	2.46	1.62	
7600'	2.33	1.50	

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

N. REQUIST

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

TETRA TECH, INC.

DAILY GEOLOGICAL REPORT

WELL N. INIGOK #1 Date 3/7/81 Time 0600

Present Depth 8050' Previous Depth 7706' Footage 24 Hrs. 344'

Formation(s) Kuigak Sh. Top 7648'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 7670-8020 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 98 min. @ 8000 ft.

Interval	Description	Avg. Drill Rate min./ft.
7670-8020	Sh, v dk brn, organic, sm, splintery	4.1
	Need: Shipping boxes for samples - washed & dryed.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units		CHROMATOGRAPH (PPM)				
			Before	After	C_1	C_2	C_3	C_4	C_5
7865-7890	160	-	90	110	14,000	3500	4200	4500	1800

Ditch Gas (Units). Background 75 Connection -0- Trip - Peaks 160 units @ 7870'

Mud: Wt. 10.7 Vis 61 W.L. 43 ph 9.0 cc Oil 0 % Cl_2 500 Temp. 10.8 °F. in 111 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
7700	2.42	1.66	-
7800	2.32	1.68	-
7900	2.42	1.64	-
8000	2.46	1.67	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch	None		
Unwashed Ditch (Paleo)	7220-7650	1 box	
Unwashed Ditch (USGS)	7220-7650	1 box	
GeoChem (canned)	7120-7690	2 boxes	
Cores	No. 4 7488-7506	7 boxes	

Geologist NORRIS REQUIST

TETRA TECH, INC.

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL N. INIGOK #1 Date 3/8/81 Time 0600

Present Depth 8073' Previous Depth 8050' Footage 24 Hrs. 23

Formation(s) Kingak Sh. Top 7648'

Present Activity: Trip

LITHOLOGIC DESCRIPTION

Interval Reported 8020-8070 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 105 min. @ 8050 ft.

Interval	Description	Avg. Drill Rate min./ft.
8020-8070	Sh. v dk brn, organic, sm. splintery	2.5

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
8055-8060	60	-	60	60	3500	2500	3500	3000	800

Ditch Gas (Units): Background 60 Connection -NA- Trip 250 Peaks 60

Mud: Wt. 10.9 Vis 68 W.L. 4.5 ph 8.5 cc Oil 0 % Cl_2 500 Temp. 106 °F. in 110 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
8000	2.46	1.67	NA

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist NORRIS REQUIST

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/9/81 Time 0600

Present Depth 8286' Previous Depth 8073' Footage 24 Hrs. 213'

Formation(s) Kingak Sh Top 7648'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 8070-8230' Sampling Interval 10 ft. Sample Quality Good
Lag Time: 107 min. @ 8200 ft.

Interval	Description	Avg. Drill Rate min./ft.
8070-8180	Sh, v dk brn/gy, sm, org. splty, tr pyr	4.0
8180-8230	Sh, a/a. w/ incr sltstn, lt brn, f arg. tr. bl/gn glau	2.8
	Penetration rate increasing to 1.8 fpm. Samples not up.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
8180-8195	125	-	70	90	10500	2600	2200	2000	1200
8205-8230	175	-	90	175	20000	4500	3500	2800	1200

Ditch Gas (Units): Background 175 @ 8230' Connection 185 Trip 160 Peaks 175 @ 8215'

Mud: Wt. 10.9 Vis 61 W.L. 4.8 ph 8.5 cc Oil 0 % Cl_2 650 Temp. 109 °F. in 110 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
8100	2.53	1.50	-
8200	2.44	1.64	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist NORRIS REQUIST

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/10/81 Time 0600

Present Depth 8478' Previous Depth 8286' Footage 24 Hrs. 192'

Formation(s) Kingak Shale Top 7648'

Present Activity: Circulating, preparing to run logs.

LITHOLOGIC DESCRIPTION

Interval Reported 8230-8478 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 110 min. @ 8478 ft.

Interval	Description	Avg. Drill Rate min./ft.
8230-8370	Sltst, lt brn, f, arg, tt, w/ ltl m - crs slt	3.0
8370-8410	Sltst as abv w/ inc sh, v dk brn - gy, sm, splty	5.0
8410-8478	Sh, v dk brn-gy, sm, splty	7.7
	NOTE: THIS IS TO CORRECT THE GAS OCCURANCE INTERVAL ON THE REPORT OF 3/10/81. CORRECTION SHOWN BELOW. THIS WILL SUPERSEDE REPORT OF 3/10/81. (Correction made 3/11/81)	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
8260-8295	175	-	175	220	12000	4000	4000	3500	1000

Ditch Gas (Units): Background 100 Connection 140 Trip 150 (on short trip) Peaks 275

Mud: Wt 11.4 Vis 73 W.L. 4.2 ph 8.5 cc Oil - % Cl_2 700 Temp. 106 °F. in 114 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
8300	2.45	1.51	-
8400	2.40	1.75	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

MORRIS REQUEST

TETRA TECH, INC.
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DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/11/81 Time 0600

Present Depth 8478' Previous Depth 8478' Footage 24 Hrs. 0

Formation(s) Kingak Top 7648'

Present Activity: Running Logs.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Logs Run: DIL/CNL/FDC	
	ISS (Short Spacing)	
	LSS (presently being run)	
	Comments on Logs:	
	No resistivities of interest.	
	Porous water sands from 2596-3265'	
	Top Pebble shale @ 7382'	
	Top Kingak shale @ 7653'	
	Top Kingak silt zone @ 8144'	
	Bottom Kingak silt zone @ 8398'	
	Shale to TD of 8478' (driller & Schlumberger TD is same)	
	NOTE: Kingak silt zone is locally identified silty interval within the Kingak in this well. (identified from cuttings)	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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)	7650-8478	2	-
Unwashed Ditch (USGS)	7650-8478	2	-
GeoChem (canned)	7690-8420	2	-
Cores	No.		

NORRIS REQUIST

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

DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 3-12-81 Time 0600

Present Depth 8478' Previous Depth 8478' Footage 24 Hrs. 0'

Formation(s) KINGAK SH Top 7648'

Present Activity: Taking SWC

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	RAN SONIC LOGS AND SHOT VELOCITY SURVEY.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist NORRIS REQUIST

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DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 3/13/81 Time 0600

Present Depth 8478' Previous Depth - Footage 24 Hrs. -

Formation(s) Kingak Top 7648' (sample)

Present Activity: Conditioning hole prior to running 9-5/8" intermediate casing.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Shot 52 SWC. Recovered 46.	
	NEED: 1/2 pint cans for SWC (2 dozen)	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. 11.3 Vis 85 W.L. 4.1 ph 9.0 cc Oil 0 % Cl_2 700 Temp. - °F. in - °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

WORDS REQUEST

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DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/14/81 Time 0600

Present Depth 8478' Previous Depth - Footage 24 Hrs. -

Formation(s) _____ Top _____

Present Activity: Running 9-5/8" intermediate casing.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Have run 80 joints of 192.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. 11.3 Vis 64 W.L. 4.3 ph 9.0 cc Oil 0 % Cl_2 700 Temp. - °F. in - °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure

Dispatched Samples:

Type	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.		

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DAILY GEOLOGICAL REPORT

WELL North Inigok #1 Date 3/15/81 Time 0600

Present Depth 8478' Previous Depth 8478' Footage 24 Hrs. 0

Formation(s) Kingak Top 7648' (samples)

Present Activity: WOC, ran 9-5/8" intermediate casing to TD, lost circulation.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. 10.3 Vis 62 W.L. 6.5 ph 9.0 cc Oil - % Cl_2 700 Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

MORRIS FROIST

TETRA TECH, INC.
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DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 3/16/81 Time 0600

Present Depth 8478' Previous Depth 8478' Footage 24 Hrs. 0

Formation(s) Kingak Shale Top 7648'

Present Activity: WOC

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Stage cemented 9-5/8" casing	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units):
Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. 10.3 Vis 54 W.L. 20 ph 12.0 cc Oil - % Cl_2 700 Temp. - °F. in - °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

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DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/17/81 Time 0600

Present Depth 8478' Previous Depth 8478' Footage 24 Hrs. 0

Formation(s) Kingak Top 7648'

Present Activity: Mixing mud preparatory to drilling out.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Drilled cmt. (8223') and float collar and to end of shoe.	
	Shut down to mix mud.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

SHEETS ATTACHED

11-9

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DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 3/18/81 Time 0600

Present Depth 8478' Previous Depth _____ Footage 24 Hrs. _____

Formation(s) _____ Top _____

Present Activity: Waiting on weather and water; will build mud to drill out.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/19/81 Time 0600

Present Depth 8478' Previous Depth 8478' Footage 24 Hrs. 0

Formation(s) Kingak Shale Top 7648'

Present Activity: Mixing mud prep to drill out of 9-5/8" casing.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	NOTE: Est drlg out @ 1030 hrs.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units):
Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

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DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 3/20/81 Time 0600

Present Depth 8563' Previous Depth 8478' Footage 24 Hrs. 85'

Formation(s) Kingak Shale Top 7648'

Present Activity: Picking up core barrel.

LITHOLOGIC DESCRIPTION

Interval Reported 8478-8563 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 67 min. @ 8500 ft.

Interval	Description	Avg. Drill Rate min./ft.
8478-8563	Sh, v dk brn-gy, sm, splty, w/ sltst, lt brn, f, arg, tt, thn strs & lams	5.0
	NEED: GEOCHEM LABELS (50)	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
8530-8540	70		55	40	8000	2400	900	600	300

Ditch Gas (Units): Background ____ Connection ____ Trip ____ Peaks ____

Mud: Wt. 10.8 Vis 37 W.L. 14.5 ph 10.5 cc Oil 0 % Cl_2 27000 Temp. 78 °F. in 81 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
8500	2.48	1.57	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/21/81 Time 0600

Present Depth 8590' Previous Depth 8563' Footage 24 Hrs. 27'

Formation(s) Kingak Shale Top 7648'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 8563-8590 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 67 min. @ 8500 ft.

Interval	Description	Avg. Drill Rate min./ft.
8563-8573	Core #5 (cut 10', rec. 9.5'), sh, v dk brn-gy, sm, splty, some mnut pyr wandlike fos	19
8573-8590	Sh, v dk brn-gy, sm, splty, tr pyr	5

GAS OCCURRENCE/SHOWS (NONE)

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background 50 Connection - Trip - Peaks -

Mud: Wt. 10.8 Vis 43 W.L. 13.5 ph 9.5 cc Oil 0 % Cl_2 23000 Temp. - °F. in - °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/22/81 Time 0600

Present Depth 8893' Previous Depth 8590' Footage 24 Hrs. 303'

Formation(s) Kingak Shale Top 7648'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 8590-8890 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 67 min. @ 8895 ft.

Interval	Description	Avg. Drill Rate min./ft.
8590-8890	Sh, v dk brn-gy, sm, flky, splty	4.0

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
8740-8750	80	0	65	55	7500	2200	1000	700	300
8800-8810	110	0	85	85	9500	400	1500	900	500

Ditch Gas (Units): Background 90 Connection 120 Trip - Peaks 110 @ 8805, 80 @ 8745

Mud: Wt. 10.9 Vis 41 W.L. 8.2 ph 9.0 cc Oil 0 % Cl_2 22000 Temp. 103 °F. in 102 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
8600	2.47	1.53	-
8700	2.50	1.45	-
8800	2.45	1.47	-
8875	2.48	1.47	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

TETRA TECH, INC.
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DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/23/81 Time 0600

Present Depth 9189' Previous Depth 8893' Footage 24 Hrs. 296'

Formation(s) Kingak Shale Top 7648'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 8890-9170 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 70 min. @ 9150 ft.

Interval	Description	Avg. Drill Rate min./ft.
8890-9120	Sh, v dk brn-gy, sm, flky, splty	4.5
9120-9150	Sh as abv w/ tr sltst, gy, shy, tt, no fluor	6.0
9150-9170	Sh, v dk brn-gy, sm, flky, splty	5.0

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
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	15000	7500	1300	2500	800

Ditch Gas (Units): Background 150 Connection 210 Trip 400 (short trip) Peaks 170 @ 8940, 150 @ 9145

Mud: Wt. 11.2 Vis 46 W.L. 10.2 ph 9.0 cc Oil 0 % Cl_2 22000 Temp. 111 °F. in 107 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
8900	2.40	1.46	-
9000	2.43	1.49	-
9100	2.47	1.54	-
9150	2.49	1.63	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch	8080-8640	1 ea set	1 & 2
Unwashed Ditch (Paleo)	8478-8900	1 (box #14)	
Unwashed Ditch (USGS)	8478-8900	1 (box #14)	
GeoChem (canned)	8420-9180	3 (boxes #23,24,25)	
Cores	No. 5 8563-8573	4	
SW CORES	2610-8478	5 (one bundle)	

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N-3

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DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/24/81 Time 0600

Present Depth 9495' Previous Depth 9189' Footage 24 Hrs. 306'

Formation(s) Kingak Shale Top 7648'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 9170-9490 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 71 min. @ 9482 ft.

Interval	Description	Avg. Drill Rate min./ft.
9170-9460	Sh, v dk brn-gy, sft, sm, flky, splty	4.8
9460-9485	Sh, v dk brn-gy, sm, w/ ltl f slty sh, 100 units gas	3.5
	NEED: 1 qt Geochem cans w/ clamps (enough *for approx. 2000')	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
9235-50	180	-	160	150	19000	4500	1200	1200	500
9335-50	200	-	165	180	20000	5000	1500	1500	500
9465-90	250	-	150	-	-	-	-	-	-

Ditch Gas (Units): Background 150 Connection 250 Trip - Peaks 200 @ 9340, 250 @ 9480

Mud: Wt. 11.2 Vis 65 W.L. 10.4 ph 11.0 cc Oil 0 % Cl_2 21000 Temp. 115 °F. in 90 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
9200	2.42	1.55	-
9300	2.40	1.56	-
9400	2.46	1.50	-
9450	2.47	1.49	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No		

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

DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 3/25/81 Time 0600

Present Depth 9823' Previous Depth 9495' Footage 24 Hrs. 328'

Formation(s) Kingak Shale Top 7648'

Present Activity: Drilling

LITHOLOGIC DESCRIPTION

Interval Reported 9490-9820 Sampling Interval 10 ft. Sample Quality GOOD
Lag Time: 75 min. @ 9800 ft.

Interval	Description	Avg. Drill Rate min./ft.
9490-9820	Sh, v dk brn-gy, sm, sft, flky, splty, tr pyr, qtz vein @ 9780-95.	3.5

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
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

Ditch Gas (Units): Background 350 Connection 650 Trip 600 {short trip} Peaks 450 @ 9780

Mud: Wt. 11.4 Vis 44 W.L. 9.6 ph 10.0 cc Oil 0 % Cl_2 22000 Temp. 112 °F. in 112 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
9500	2.47	1.43	-
9600	2.43	1.38	-
9700	2.47	1.52	-
9800	2.44	1.43	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist NORRIS REQUIST

TETRA TECH, INC.

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NORTH INIGOK #1 Date 3/26/81 Time 0600

Present Depth 9933' Previous Depth 9823' Footage 24 Hrs. 110'

Formation(s) Kingak Shale Top 7648'

Present Activity: Tripping for new bit.

LITHOLOGIC DESCRIPTION

Interval Reported 9820-9933 Sampling Interval 10 ft. Sample Quality Fair
Lag Time: 77 min. @ 9900 ft.

Interval	Description	Avg. Drill Rate min./ft.
9820-9933	Sh, v dk brn-gy, sm, sft, flky, splty, tr pyr, tan calc veins @ 9890-9933	4.5

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
9810-25	500	NC	300	350	68000	9000	10000	1800	1000
9895-9910	400	NC	300	300	60000	10000	10000	1500	600

Ditch Gas (Units): Background 225 @ 9930 Connection 650 @ 9899 Trip - Peaks 500 @ 9820

Mud: Wt. 11.7 Vis 46 W.L. 9.4 ph 10.0 cc Oil 0 % Cl_2 22000 Temp. 96.7 °F. in 58.8 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
9800	2.47	1.43	-
9850	2.46	1.40	-
9900	2.38	1.44	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/27/81 Time 0600

Present Depth 10122' Previous Depth 9933' Footage 24 Hrs. 189'

Formation(s) Sag River Top 10097'
Shublik 10109'

Present Activity: Circulating up samples

LITHOLOGIC DESCRIPTION

Interval Reported 9933-10122 Sampling Interval 10 ft. Sample Quality Fair
Lag Time: 78 min. @ 10100 ft.

Interval	Description	Avg. Drill Rate min./ft.
9933-10097	Sh, v dk gy, sm, flky, splty w/ tr qtz & calc veining	6.5
10097-10109	Sltst, gy, f, shy, hd, tt, abunt v f glau	5.5
10109-10122	Ls, lt tan to gy, mot, gran, & dk gy micxl	6.0

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
10065-75	500	-	250	200	45000	7000	700	1800	700
10100-105	450	-	225	250	40000	5000	600	1600	600

Ditch Gas (Units): Background 250 Connection - Trip - Peaks -

Mud: Wt. 11.7 Vis 44 W.L. 9.6 ph 9.5 cc Oil 0 % Cl_2 24000 Temp. 114 °F. in 115 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
9950	2.42	1.52	-
10000	2.40	1.51	-
10050	2.45	1.41	-
10100	2.48	1.69	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist NORRIS REQUIST

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/28/81 Time 0600

Present Depth 10,161' Previous Depth 10,122' Footage 24 Hrs. 39'

Formation(s) Sag River Top 10,097'
Shublik 10,109'

Present Activity:

LITHOLOGIC DESCRIPTION

Interval Reported 10122-10160 Sampling Interval 10 ft. Sample Quality Fair
Lag Time: 80 min. @ 10150 ft.

Interval	Description	Avg. Drill Rate min./ft.
	Cutting Core #6:	
	Penetration rates: 1 foot 22 min/ft	
	2 foot 22 min/ft	
	3 foot 22 min/ft	
	4 foot 15 min/ft	
10122-10160	Ls, lt gy - dk gy, mot, miero xyl, fos	4

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5
10137-10147	300	-	150	175	45,000	10,000	600	1000	400

Ditch Gas (Units): Background 150 Connection 300 Trip 425 Peaks 300 @ 10145

Mud: Wt. 11.7 Vis 44 W.L. 9.8 ph 9.3 cc Oil - % Cl_2 22K Temp. °F. in °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure
10050	2.45	1.41	-
10100	2.48	1.69	-
10150	2.55	1.42	-

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Pale.)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/29/81 Time 0600

Present Depth 10170' Previous Depth 10160' Footage 24 Hrs. 9

Formation(s) Schublik Top 10109'

Present Activity: Logging

LITHOLOGIC DESCRIPTION

Interval Reported 10160-10170 Sampling Interval 10 ft. Sample Quality Good
Lag Time: 80 min. @ 10150 ft.

Interval	Description	Avg. Drill Rate min./ft.
10160-10170	Core #6: Cut & rec. 10'	
	10160-10170 - Ls, gy, mxly, argl, ⁄v fos.	19
	TD Log: 10171	
	Log Tops: (CNL/FDC)	
	Sag R. 10,096'	
	Sublik 10,108	

GAS OCCURRENCE/SHOWS NONE

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background 75 Connection - Trip 250 Peaks -

Mud: Wt. 11.7 Vis 44 W.L. 9.8 ph 9.3 cc Oil - % Cl_2 22K Temp. 99 °F. in 65 °F. out

Data Unit:

Depth	Shale Density	Dc Exponent	Pore Pressure

Dispatched Samples: None

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/30/81 Time 0600

Present Depth 10,170' Previous Depth 10,170' Footage 24 Hrs. 0

Formation(s) Shublik Top 10,134' (log)

Present Activity: Velocity Survey

LITHOLOGIC DESCRIPTION

Interval Reported - Sampling Interval - ft. Sample Quality -
Lag Time: - min. @ - ft.

Interval	Description	Avg. Drill Rate min./ft.
	Logs:	
	Temp. 100-10170'	
	DLL 8452-10167'	
	CNL/FDC 8450-10169'	
	BHCS/GR 8450-10162'	
	Dip Meter 8452-10160'	
	CAL/FDC/GR 7450-8452'	
	Problem w/ velocity survey - cyclic noise interferance.	

GAS OCCURRENCE/SHOWS (NONE)

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units). NONE
Background ____ Connection ____ Trip ____ Peaks ____

Mud: Wt. 11.7 Vis 44 W.L. 10 ph 9.5 cc Oil - % Cl_2 23K Temp. - °F. in - °F. out

Data Unit: NONE

Depth	Shale Density	Dc Exponent	Pore Pressure

Dispatched Samples: NONE

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

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

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 3/31/81 Time 0600

Present Depth 10170' Previous Depth 10170' Footage 24 Hrs. 0

Formation(s) Shublik Top 10134' (log)

Present Activity: Laying down drill collars

LITHOLOGIC DESCRIPTION

Interval Reported ___ - ___ Sampling Interval ___ - ___ ft. Sample Quality ___ - ___
Lag Time: ___ - ___ min. @ ___ - ___ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Log: completed	
	Velocity Survey completed. 6 shots	
	10,134' Top Shublik	
	10,096' Top Sag River	
	9,500' Kingak	
	8,400' Base test zone	
	8,144' Top test zone	
	7,653' Top Kingak	
	SWC Shot 13, rec. 12	
	1 - 10098' (resetvoir core) (Sag River)	
	3 - 10018' geochem	
	3 - 9500' geochem (lost 1)	
	3 - 9007' geochem	
	3 - 8507' geochem	
	Second Temp. Log. Surface to 10,161'.	

GAS OCCURRENCE/SHOWS (NONE)

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): NONE
Background ___ Connection ___ Trip ___ Peaks ___

Mud: Wt. 11.7 Vis 43 W.L. 10.0 ph 9.3 cc Oil 0 % Cl_2 ___ Temp. ___ °F. in ___ °F. out

Data Unit: NONE

Depth	Shale Density	Dc Exponent	Pore Pressure

Dispatched Samples:

Type		Interval	No. of Boxes	Set No.
Washed & Dried Ditch		8640-10170	2	#1
Washed & Dried Ditch		8640-10170'; Surface-10170	2; 10	#2; #3
Unwashed Ditch (Paleo)		8900-10170'	3	15, 16, 17 (Box No.
Unwashed Ditch (USGS)		8900-10170'	3	15, 16, 17 (Box No.
GeoChem (canned)		9180-10170'	3	26, 27, 28 (Box No.
Cores	(SWC)	No. 8507-10098'	1; 4 cans geochem	

NOTIFY GEOLIST

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL N. INIGOK #1 Date 4-1-81 Time 0600

Present Depth 10,170' Previous Depth 10,170' Footage 24 Hrs. -

Formation(s) SHUBLIK Top 10,134' (log)

Present Activity: Pulling drill pipe; prep to perf.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Set cmt plug 10,000-10,170'	
	Set cmt retainer at 8411'	
	Squeeze 94 sacks Class G cmt at 8411-8561'	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): NA
Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. out

Data Unit: NA

Depth	Shale Density	Dc Exponent	Pore Pressure

Dispatched Samples: NONE

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Polar)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

SAMPLES REQUIST

TETRA TECH, INC.

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U. S. GEOLOGICAL SURVEY/ONPRA

DAILY GEOLOGICAL REPORT

WELL NO. INIGOK #1 Date 4/2/81 Time 0600

Present Depth 10,170' Previous Depth 10,170' Footage 24 Hrs. -

Formation(s) Shublik Top 10,134' (log) (PB 8411')

Present Activity: DST #1 (Final Shutin)

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	Perforate 8330-8360'; 8257-8307', 4 shots/ft. Packer at 8195'.	
	DST #1:	
	IFP 31 min.	
	ISIP 60 min.	
	FFP 240 min.	
	Initial Open: Mod blow on initial opening increasing to strong blow off btm of bucket.	
	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' gas cut mud.	
	5 gas samples	
	4 gas cut mud samples. Cl_2 20K	
	Final close in 0130 hrs. Will run to 0930.	

GAS OCCURRENCE/SHOWS

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. 11.5 Vis 42 W.L. 10.5 ph 9.5 cc Oil _____ % Cl_2 22000 Temp. _____ °F. in _____ °F. 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 (USGS)			
GeoChem (canned)			
Cores	No.		

Geologist: MORRIS REMIST

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

DAILY GEOLOGICAL REPORT

WELL N. INIGOK #1 Date 4/3/81 Time 0600

Present Depth 10,170' Previous Depth (10,170') PBD 8144' Footage 24 Hrs. -

Formation(s) Shublik Top 10,134' (log)

Present Activity: Circulating out gas-cut mud.

LITHOLOGIC DESCRIPTION

Interval Reported _____ Sampling Interval _____ ft. Sample Quality _____
Lag Time: _____ min. @ _____ ft.

Interval	Description	Avg. Drill Rate min./ft.
	DST #1 (See attached DST report)	
	Set cmt retainer 8192'.	

GAS OCCURRENCE/SHOWS N/A

INTERVAL	Total Gas Units	Cuttings Gas Units	Background Gas Units Before	Background Gas Units After	CHROMATOGRAPH (PPM) C_1	C_2	C_3	C_4	C_5

Ditch Gas (Units): N/A
Background _____ Connection _____ Trip _____ Peaks _____

Mud: Wt. _____ Vis _____ W.L. _____ ph _____ cc Oil _____ % Cl_2 _____ Temp. _____ °F. in _____ °F. out

Data Unit: N/A

Depth	Shale Density	Dc Exponent	Pore Pressure

Dispatched Samples:

Type	Interval	No. of Boxes	Set No.
Washed & Dried Ditch			
Unwashed Ditch (Paleo)			
Unwashed Ditch (USGS)			
GeoChem (canned)			
Cores	No.		

NORRIS REQUIST

N-2 FINAL REPORT