



00218973

WELL DATA SUMMARY

OPERATOR: The Anschutz Corporation, Inc.

WELL: #1 Wickstrom

LOCATION: C SW SE (660' FSL, 1980' FEL) Section 12-8N-66W,  
Weld County, Colorado

ELEVATION: 5067 Gr., 5079 KB

FIELD: Wildcat

SPUD: October 16, 1966

SURFACE CASING: 9-5/8" @ 412' KB w/450 sx

CONTRACTOR: Circle A Drilling Company, Rig #15 - Oil Well 76  
with National C-350 18" & G.D. FXK 14" Pumps

TOOLPUSHER: Mr. Dale (Jake) Knust

CORES: Core #1 9411-9457 Lyons

TESTS: None

SHOWS OF OIL: No shows of oil were found.

SAMPLES: 3600' to TD, permanent file American Stratigraphic  
Company, Denver, Colorado

LOGS: Schlumberger Induction Electrical TD to base of surface  
casing, Formation Density Log TD to 8000'

TOTAL DEPTH: 9500' Driller, 9501' Schlumberger in Lower Satanka

COMPLETED: P&A November 5, 1966

MARKER BED TOPS  
Elevation 5079' K.B.

	<u>Sample</u>	<u>Log</u>	<u>Log Subsea</u>
Hygiene	3935	3938	+2141
Niobrara	7292	7295	-2216
Carlile		7585	-2506
Greenhorn		7805	-2726
Graneros		7888	-2809
"J" Sand	8082	8087	-2908
Skull Creek		8244	-3165
Cheyenne (Dakota)	8324	8339	-3260
Morrison	8425	8423	-3344
Entrada	8690	8699	-3620



Lykins		8754	-3675
Little Medicine	9105	9107	-4028
Ervay	9155	9157	-4078
Forelle	9200	9206	-4127
Upper Satanka		9260	-4181
Minnekahta	9266	9271	-4192
Blaine		9351	-4272
Lyons	9396	9394	-4315
Lyons Porosity		9400	-4321
Lower Satanka	9467	9465	-4386
Total Depth	9500	9501	-4422

SAMPLE DESCRIPTION  
(Adjusted to Electric Log Depths)

3600-3720	Sh, m gy, sli slty, mic, m sft, trc sd, lt gy-whi, fg, sa, S&P, calc & cly fil, m H, T.
3720-3938	Sh, a/a, w/sli incr in bent, gy-whi, trc sd a/a.
<u>Hygiene 3938</u>	
3938-3975	Silt, lt gy, v arg, mic, grdg to silty mudstone.
3975-4310	Sh, m gy, sli slty in pt, sft.
4310-4340	Sd, vf-fg, to silt, m-lt gy, sa, cly fil, glauc, calc, firm, T.
4340-4840	Sh, m gy-gnh gy, sli slty, mic a/a, trc silt a/a, glauc, mic, sft, T.
4840-4890	Silt-vfg sd, m-dk gy, v arg, grdg to sdy mudstn a/a.
4890-4980	Sh, m gy, silt w/strgrs sd, m-lt gy, vf-f, poor sort, sa-a, S&P, glauc, mic, calc, cly fil, T.
4980-5050	Sh, dk gy-m gy, sli-v slty, mic.
5050-5200	Sh, m-dk gy, ptly slty, trc bent, whi-blu, trc coal, silt, sd, w/sm sh, dk gy-blk, carb, fis-splintery.
5200-5250	Sh, m-dk gy, fis, ptly sli slty & mic.
5250-5440	A/a w/incr in silt, v arg, slty mudstone.
5440-6000	Sh, m-dk gy, ptly mic & slty, fis, m sft.
6000-6310	Sh, m-dk gy, fis, sli mic.
6310-6400	A/a, bcmg ptly sli slty.
6400-6450	Sh, m-dk gy-brn, v slty, grdg to arg silt, Sh, some finely disseminated carb mat'l.
6450-6640	A/a, w/sh, dk gy-blk, fis, carbonaceous.
6640-7000	Sh, dk gy-blk, fis carb.
7000-7070	Sh, m-dk gy-brn, fis, platy, ptly calc.
7070-7150	A/a w/trc silt-vfg sd, lt-m gy, sa-sr, calc, cly fil, glauc, T.
7150-7295	Sh a/a, bcmg ptly silt, trc sd a/a.
<u>Niobrara 7295</u>	
7295-7310	Sh, m-dk gy-dk brn, bcmg more calc, less slty, trc lightly speckled w/calc mat'l.
7310-7565	Sh, dk gy-dk brn, v calc, w/trc ltly speckled.
7565-7585	Ls, cre-gy, dnse, arg, inbed w/sh a/a.
<u>Carlisle 7585</u>	
7585-7630	Sh, dk brn, v sli slty, calc, fis.



7630-7805	Sh, dk gy-dk brn, v slty, calc.
<u>Greenhorn 7805</u>	
7805-7888	Sh, dk brn-blk sh, blocky-splintery, m H w/trc ls, tan-brn, dnse, ptly arg.
<u>Graneros 7888</u>	
7888-8045	Sh, dk gy-blk, blocky to fis.
8045-8088	Sh, a/a, inbed w/strgrs silt, m-dk gy, arg, silic, H&T.
<u>"J" Sand 8088</u>	
8088-8130	Sd, whi-lt gy, f-crs, v poor sort, sr-sa, whi cly fil, fri, calc, T-v lo P&P, faint yellow min fluor, no stain or cut.
8130-8150	Sd, lt gy-m gy, f-vf, v qtzic, cly fil, sa, H&T.
8150-8214	Silt, m-dk gy, arg, mic, qtzic, H&T, flecks carb mat'l inbed w/H, slty sh, dk gy, & m gy sd, vf-f, qtzic, H&T.
8214-8244	Sh, m-dk gy, v slty, sil, inbed w/silt a/a, H.
<u>Skull Creek Shale 8244</u>	
8244-8318	Sh, dk gy-blk-dk brn, fis-blocky, ptly sli slty.
8318-8339	Sh, a/a, w/sm silt, m-gy, v arg, grdg to slty sh.
<u>Cheyenne (Dakota) 8339</u>	
8339-8354	Sd, lt gy-whi, vfg-silt, qtzic, v H&T, inbed w/slt, m gy, v arg, mic, qtzic, H&T.
8354-8374	Sd, lt gy-whi, vf-f, sa, qtzic, sm cly fill, H&T, inbed w/silt ? a/a.
8374-8387	Sd, lt gy-whi, f-crs, sa-a (Sec. xtl growth ?) qtzic, poor sort, ptly cly fil, H, T-lo P&P.
8387-8404	Sd, f-crs, sa-rdd, ptly qtzic, H&T, ptly fri & cly fill, T-v lo P&P, trc pyr.
8404-8413	Sd, whi-lt gy, f-v crs, sa-sr, qtzic in pt, ptly cly fil, much cht, gy-tan, milky pyr (microcgl?).
8413-8423	Ls, gy-gnh gy, slty, arg, grdg to mudstone, v calc.
<u>Morrison 8423</u>	
8423-8450	Clystone, gy green, subwaxy.
8450-8490	Clystone, gy grn-gy, lt gy, tan, mauve, subwaxy.
8490-8570	A/a, bcmg ptly calc, inbed w/ls, lt gy-tan, arg, dnse.
8570-8590	Sh & clystone, gy-green, grn, tan-brn, rose, subwaxy, ptly calc w/trc sd, whi, f-vfg, sa, calc & marl fil, T.
8590-8620	Sh & clystone, varicol, dull, a/a, non calc, non aren.
8620-8670	A/a, inbed w/ls, gy-tan-whi, dnse, v arg, grdg to calc sh & sd, lt gy-whi, fg, sa-sr, v calc, cly & marl fil, T.
8670-8699	Sh & clystone, varicol, dull w/incr in rose, mauve, maroon.
<u>Entrada 8699</u>	
8699-8730	Sd, whi-cre, vf-f, sr, v fri, sft, calc, fr P&P ?
8730-8740	Silt-sd, vfg, orange, v calc, grdg to sdy ls.
8740-8754	Sh, lt orange, v calc, grdg to marl, earthy, sft.
<u>Lykins 8754</u>	
8754-9107	Sh, br red-orange, sli-v calc, sli-v slty, sft, earthy, w/trc anhy, whi, chlky.
Note:	Samples from 8900 to 9350 very poor to worthless.
<u>Little Medicine MBR (Goose Egg) 9107</u>	
9107-9206	Anhy, whi-pnk, chky, vf xln, trc dolo, or-tan, dnse, inbed w/sh, br red, m firm, ptly anhyic, ptly slty.
<u>Forelle 9206</u>	
9206-9260	Anhy, whi-pnk, chlky-vf xln-suc, inbed w/dolo, pnk-tan-brn, dnse, cryptoxln, arg, T, & sh, br red a/a.



Satanka 9260

9260-9271

Sh, br red, non aren, non anhyic, firm.

Minnekahta 9271

9271-9300

Dolo, tan-brn, dnse, arg, inbed w/anhy, whi-pnk, a/a.

9300-9351

Sh, br red, ptly slty, anhyic, firm.

Blaine 9351

9351-9394

Sh, br red a/a, inbed w/anhy a/a.

Lyons 9394

9394-9400

Sd, pnk-lt orange, vf-m, sr, poor sort, v anhyic & dolie, H&T.

9400-9411

Sd, pnk-lt orange, vf-m a/a, less anhyic, lo-fr P&P.

9411-9457

Core #1, cut 46', rec 35'.

9411-9414 (3')

Sd, pnk-lt orange, f-m, sr-r, poor sort, ly cem w/A, fri, v gd P&P, X-bed.

9414-9423 (9')

Sd, pnk, a/a, exc vf-f w/sm floating M, more A, cem, H&T-lo P&P (X-bed top 2')

9423-9424 (1')

Sd, pnk-lt or, m g, sr-r, v poorly cem w/anhy, well rdd, fri, gd-excel P&P, X-bed.

9424-9426 (2')

Sd, pnk-or, f-m, m sort, more anhy cem, lo-fr-gd P&P, X-bed.

9426-9428 (2')

Sd, a/a, less anhy cem, f-gd P&P, X-bed.

9428-9431 (3')

Sd, pnk-or, vf-f, w/sm floating mg, sr-sa, poor sort, A cem, T-lo P&P, fnly dessiminated blk xln mat'l (Hematite?)

9431-9432 (1')

Sd, pnk-or, mg, sr-r, loosely cem w/A, gd-excel P&P.

9432-9433 (1')

Sd, pnk, vf-f, poor sort, anhyic, T-lo P&P.

9433-9438 (5')

Sd, a/a, mg, sli cem w/anhy, gd-excel P&P.

9438-9443 (5')

Sd, a/a, fg to fnly m, A cem, f-gd P&P, X-bed.

9443-9445 (2')

Sd, pnk-or, vf-fg, sa-sr, v anhyic, H&T, V fract.

End of core description.

9457-9465

Sd, pnk-lt or, vf-m, sr, anhyic, firm, lo P&P.

Lower Satanka 9465

9465-9474

Sh, br red, v sdy, firm.

9474-9501

Sd, pnk-lt or-or, vf-m, predom vf-f, sr, anhyic, sli-v arg, firm-H&T.

DRILLING RATE

Minutes per 10' Interval

3700-3800

5, 5, 5, 5, 7

3800-3900

6, 5, 6, 6, 7, 6, 6, 6, 6, 8

3900-4000

7, 7, 6, 4, 4, 5, 7, 7, 7, 7

4000-4100

7, 8, 7, 7, 9, 10, 10, 10, 11, 11

4100-4200

8, 6, 3, 4, 4, 4, 4, 8, 9, 8

4200-4300

9, 9, 9, 17, -, 4, 3, 3, 3, 3

4300-4400

4, 3, 5, 3, 4, 10, 6, 6, 8, 6

4400-4500

6, 5, 7, 6, 5, 6, 7, 6, 7, 8

4500-4600

7, 8, 10, 12, 13, 12, 10, 8, 8, 8

4600-4700

8, 9, 8, 8, 9, 9, 12, -, -, 12

4700-4800

12, 10, 6, 6, 6, 6, 6, 7, 8, 8

4800-4900

7, 7, 7, 9, 10, 9, 9, 8, 9, 9

4900-5000

8, 10, 10, 9, 10, 10, 13, 11, 12, 10



5000-5100	10, 10, 10, 9, 10, 10, 9, 12, 9, 10
5100-5200	9, 11, 13, 6, 6, 6, 5, 5, 6, 6
5200-5300	6, 6, 6, 6, 6, 5, 6, 6, 6, 7
5300-5400	8, 7, 8, 8, 8, 7, 7, 7, 7, 6
5400-5500	4, 5, 7, 6, 7, 8, 7, 7, 7, 7
5500-5600	7, 7, 7, 7, 7, 7, 5, 5, 6, 7
5600-5700	7, 7, 7, 7, 7, 7, 7, 7, 6, 5
5700-5800	5, 6, 7, 6, 5, 5, 5, 5, 6, 6
5800-5900	6, 6, 6, 6, 7, 7, 8, 7, 7, 6
5900-6000	4, 7, 7, 6, 6, 6, 6, 6, -, -
6000-6100	-, 7, 8, 10, 11, -, 7, 7, 7, 7
6100-6200	7, 7, 7, 7, 7, 7, 7, 7, 7, 7
6200-6300	7, 7, 7, 7, 7, 8, 8, 6, 4, 4
6300-6400	6, 7, 8, 7, 7, 7, 7, 7, 8, 7
6400-6500	7, 7, 7, 6, 6, 6, 7, 7, 8, 8
6500-6600	9, 9, -, 8, 8, 7, 8, 8, 8, 8
6600-6700	9, 11, 11, 11, 11, 10, 10, 10, 10, 10
6700-6800	10, 8, 8, 9, 9, 9, 9, -, 9, 10
6800-6900	10, 10, 10, 11, 10, 10, 10, 11, 11, 11
6900-7000	12, 11, 11, 11, 9, 9, 9, 9, 9, 9
7000-7100	7, 8, 8, 8, 9, 8, 8, 8, 9, 9
7100-7200	8, 9, 9, 9, 9, 14, 14, 14, 13, 12
7200-7300	15, 15, 13, 13, 13, 12, 13, 10, 12, 18
7300-7400	21, 22, 13, 9, 7, 8, 8, 8, 8, 8
7400-7500	7, 8, 8, 8, 8, 9, 10, 10, 10, 10
7500-7600	11, 12, 15, 15, 18, 20, 21, 21, 10, 15
7600-7700	17, 16, 17, 17, 18, 19, 19, 19, 19, 18
7700-7800	20, 19, -, 13, 13, 12, 12, 11, 10, 11
7800-7900	-, 10, 10, 11, 11, 11, 13, 12, 14, 14
7900-8000	13, 12, 11, 11, 11, 11, 13, 15, 15, 15

Minutes per 5' Interval

8000-8050	7, 7, 7, 7, 7, 6, 7, 9, 10, 10
8050-8100	13, 20, 23, 19, 25, 20, 14, 8, 9, 13
8100-8150	11, 10, 11, 12, 18, 26, 25, 24, 31, 35
8150-8200	42, 48, 27, 25, 39, 36, 46, 62, 36, 45
8200-8250	63, 99, 26, 24, 24, 24, 24, 24, 28, 28
8250-8300	23, 25, 34, 36, 36, 30, 34, 33, 34, 36
8300-8350	35, 37, 37, 30, 24, 54, 56, 58, 61, 70
8350-8400	26, 42, 90, 50, 12, 10, 16, 13, 14, 14
8400-8450	6, 13, 42, 58, 58, 60, 54, 54, 65, -

Minutes per 10' Interval

8450-8500	57, 56, 52, 46, 46
8500-8600	50, 56, 63, 77, 34, 48, 63, 66, 58, 66
8600-8700	60, 68, 54, 56, 59, 57, 43, 40, 45, 10
8700-8800	7, 7, 7, 96, 74, 74, 80, --, 42, 39
8800-8900	41, 51, 70, 66, 64, 70, 62, 68, --, 34
8900-9000	34, 36, 36, 40, 46, 36, 38, 38, 38, 38

Minutes per 2' Interval

9000-9020	8, 8, 8, 8, 9, 7, 10, 7, 7, 7
9020-9040	6, 8, 8, 10, 10, 9, 9, 10, 9, 11



9040-9060 11, -, -, -, 8, 7, 8, 7, 7, 8  
 9060-9080 7, 6, 7, 8, 7, 7, 8, 7, 7, 7  
 9080-9100 7, 7, 7, 8, 8, 6, 7, 8, 7, 7  
 9100-9120 7, 7, 6, 6, 6, 8, 8, 8, 8, 9  
 9120-9140 9, 9, 8, 6, 11, 10, 10, 9, 8, 8  
 9140-9160 9, 10, 10, 9, 8, 11, 6, 7, 6, 8  
 9160-9180 10, 11, 8, 8, 11, 7, 7, 7, 7, 9  
 9180-9200 9, 9, 10, 10, 10, 9, 8, 11, 9, 9  
 9200-9220 5, 5, 5, 5, 5, 7, 6, 6, 7, 7  
 9220-9240 7, 7, 8, 8, 7, 6, 6, 7, 8, 9  
 9240-9260 10, 10, 10, 8, 8, 7, 10, 12, 9, 9  
 \* 9260-9280 8, 11, 12, 7, 7, 8, 7, 7, 7, 8  
 \* 9300-9320 11, 13, 12, 12, 13, 12, 11, 7, 9, 10  
 9320-9340 -, -, -, 11, 10, 8, 10, 12, 11, 13  
 9340-9360 12, 13, 11, 10, 7, 7, 7, 6, 7, 7  
 9360-9380 9, 9, 7, 7, 8, 7, 8, 11, 7, 7  
 9380-9400 7, 10, 7, 7, 7, 7, 9, 16, 9, 7  
 9400-9410 5, 7, 7, 7, 10  
 9410-9460 See coring time below  
 9460-9480 3, 7, 8, 7, 11, 10, 6, 7, 5, 6  
 9480-9500 5, 6, 6, 7, 7, 9, 10, 11, 17, 17  
 \* 9280-9300 8, 7, 8, 8, 8, 8, 9, 8, 14, 11

### CORING TIME

Minutes per 1' Interval  
 9411-9421 10, 4, 6, 15, 5, 8, 3, 6, 5, 5  
 9421-9431 3, 7, 10, 16, 10, 2, 9, 15, 4, 11  
 9431-9441 6, 4, 2, 7, 5, 6, 17, 29, 3, 16  
 9441-9451 10, 10, 10, 6, 4, 4, 8, 5, 8, 16  
 9451-9457 9, 7, 7, 6, 7, 19

### HOLE DEVIATION FROM VERTICAL

Date	Depth	Deviation
10/17/66	150	1/4°
10/18/66	1950	1/4°
10/19/66	3715	3/4°
10/19/66	4245	11-3/4°
10/20/66	5129	1-3/4°
10/21/66	6710	1/2°
10/22/66	7323	1-3/4°
10/23/66	7800	1
10/24/66	8055	1-1/2°

### BIT RECORD

Run	Size	Make	Type	Depth Out	Feet	Hours	Remarks
A	13-3/4	Reed	YT3AR	420	420	12	
1	7-7/8	Smith	DT-J	1950	1530	8-3/4	
2	7-7/8	HTC	OSC3A-J	3715	1765	15-3/4	



3	7-7/8	HTC	OSC3A-J	4245	530	7	
4	7-7/8	STC	DT-J	5129	884	13-3/4	
5	7-7/8	STC	DT-J	6050	921	11-3/4	
6	7-7/8	STC	DT-J	6710	660	9-3/4	
7	7-7/8	STC	DT-J	7323	613	12-3/4	
8	7-7/8	STC	DT-J	7800	477	12	
9	7-7/8	HTC	OSC3-J	8055	255	6	Broken teeth
10	7-7/8	Reed	YHG-J	8159	104	7-3/4	Dull
11	7-7/8	Reed	YMG-J	8190	31	4-1/4	Bald
12	7-7/8	Reed	YHG-J	8219	19	4-1/4	Bald
13	7-7/8	HTC	WDR-J	8317	108	11-1/4	Dull
14	7-7/8	Reed	YHG-J	8349	32	5-3/4	Bald
15	7-7/8	HTC	WDR-J	8364	15	2-3/4	Bald
16	7-7/8	Reed	YHWG-J	8380	16	1-3/4	Bald
17	7-7/8	Reed	YHWG-J	8412	32	2-1/4	Bald
18	7-7/8	Reed	YHG-J	8449	37	7-1/2	
19	7-7/8	HTC	ODV-J	8541	92	9-1/4	
20	7-7/8	HTC	ODV-J	8660	119	12	
21	7-7/8	Reed	YS1G-J	8773	113	9-1/2	
22	7-7/8	Reed	YS1G-J	8887	114	10-3/4	
23	7-7/8	Reed	YS1G-J	9043	156	10-3/4	
24	7-7/8	Reed	YS1G-J	9188	145	10-1/4	
25	7-7/8	Reed	YS1G-J	9319	131	9-3/4	
26	7-7/8	Reed	YS1G-J	9411	92	6-1/2	
B	6-1/8	Chris.	D. Core	9457	46	6-3/4	
27	7-7/8	Reed	YHWG-J	9500	43	3-1/4	

LOG OF OPERATIONS  
(As of 7:00 A.M. Daily)

10/15/66 RURT.  
 10/16/66 RURT.  
 10/17/66 420' circ for surf csg. Spud 7:00 PM 10/16/66, Drld 13-3/4"  
                     surf hole to 420' in 12 hrs.  
 10/18/66 673' Drlg. Set 13 jnts new 9-5/8" 32.30# H-40 Range 2 short  
                     T.&C. total 400.10' cem @ 412' KB by HOWCO w/450 sx reg 2%  
                     CaCl. Plug down @ noon. Drld plug @ 4:15 A.M.  
 10/19/66 3500' Drlg.  
 10/20/66 4773' Drlg.  
 10/21/66 6050' Trip.  
 10/22/66 7085' Drlg.  
 10/23/66 7700' Drlg. Pulled bit #7 w/1 engine. SLM 7335.20, board  
                     7333.4 - no correction. Geologist on location @ 1:30 PM  
                     10/23/66.  
 10/24/66 8065' Drlg. Picked up 6 DC @ 7800'. Circ samples 2 hrs  
                     before trip @ 8055'. Washed 70' to bottom @ 8055.  
 10/25/66 8190' Trip. Circ samples 2 hrs @ 8080, 2 hrs @ 8095. Lag  
                     time 1 hr 42 mins @ 8080'. Wash & ream 120' to bottom @  
                     8190'.  
 10/26/66 8293' Drlg. Wash & ream 150' to bottom @ 8209' Magnaflux  
                     DC's, laid down one DC w/cracked pin.



10/27/66 8364' Trip. Wash & ream 65' @ 8317, 35' @ 8349.  
 10/28/66 8442' Drlg. Washing 50 & 60' to bottom on all trips. Geologist  
 left location 10:00 A.M. 10/28/66.  
 10/29/66 8555' Drlg.  
 10/30/66 8750' Drlg.  
 10/31/66 8887' Drlg.  
 11/1/66 9143' Drlg.  
 11/2/66 9319' Trip. Geologist on location at 11:30 PM 11/1/66.  
 11/3/66 9411' Circ w/core head, prepare to core. Circ'd samples 2  
 hrs @ 9351', 2¼ hrs @ 9377', 2¼ hrs @ 9396' and 2½ hrs  
 @ 9411'. Cored 46' in 6¼ hrs, bbl jammed.  
 11/4/66 9500' Logging w/Schlumberger. Reached TD @ 3:15 AM. Circ  
 2 hrs, on bank & pick up Schl @ 8:30 A.M. Finished logging  
 @ 3:30 PM. Plugging orders issued & rig released @ 5:30  
 P.M.  
 11/5/66 9500' Plugged & tearing down.

PLUGGING DATA

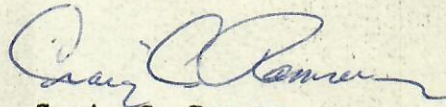
Plugged by HOWCO 11/4/66

<u>Formation</u>	<u>Plug</u>		<u>Sacks</u>
	<u>From</u>	<u>To</u>	
Lyons Sand	9430	9355	25
"J" Sand	8130	8055	25
Hygiene	3975	3900	25
Base Surf Csg	430	380	20
Top Surf Csg	20	0	10

DISCUSSION

Samples were examined carefully from 3600 to total depth of 9501 and no shows of oil or gas were found. Good quality samples through the Cretaceous "J" and Lakota sands revealed that these sections were clay filled and impermeable. This clay filling causes the electric logs to take on a misleading character. Electric logs from nearby wells exhibit this same peculiar character and drillstem tests invariably confirm that these zones are impermeable and non productive.

The Lyons sand was cored and found to be exceptionally porous and permeable and of fine reservoir quality, but carried no shows. Accordingly, the #1 Wickstrom was plugged and abandoned.

  
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