

KELLAHIN, KELLAHIN AND AUBREY

ATTORNEYS AT LAW

EL PATIO BUILDING

17 NORTH GUADALUPE

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W. THOMAS KELLAHIN  
KAREN AUBREY

JASON KELLAHIN  
OF COUNSEL

July 5, 1991

Mr. David R. Catanach  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

HAND DELIVERED

Re: Socorro Petroleum Company  
Administrative Request for  
Surface Injection Pressure  
Increase for its H. E. West  
"B" No 24 Well Keel-West  
Waterflood Project,  
Eddy County, N.M.

Dear Mr. Catanach:

On behalf of Socorro Petroleum Company, I am  
requesting an increase in the surface injection pressure  
limitation for the following well:

H. E. West "B" No 24 Well  
660 feet FNL and 660 feet FEL (Unit A)  
Section 10, T17S, R31E, NMPM  
Keel-West Waterflood Project  
Grayburg-Jackson Pool  
Eddy County New Mexico

On June 14, 1990 the Division entered Order R-2268-C  
(copy enclosed) which authorized among other things  
surface injection pressures for the referenced well to  
450 psi above the formation parting pressure.

On June 25, 1990, the Division approved  
Administrative Order WFX-597 (copy enclosed) which set  
the surface injection pressure for this well at 675 psi.

David R. Catanach  
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Please find enclosed a Step Rate Test dated June 20, 1991 which shows the parting pressure for this well to be 1440 psi at the surface.

Accordingly, we are requesting an administrative order authorizing a new maximum surface pressure of 450 psi above the parting pressure or a new maximum surface injection pressure of 1890 psi.

Please call Mr. Perry Hughes of Socorro Petroleum Company if you have any technical questions about this application. Mr. Hughes can be reached at (915) 687-4338.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'W. Thomas Kellahin', written over a horizontal line.

W. Thomas Kellahin

Enclosures

cc: Perry L. Hughes

Socorro Petroleum Company

STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 9929  
Order No. R-2268-C

APPLICATION OF SOCORRO PETROLEUM  
COMPANY FOR WATERFLOOD EXPANSION  
AND TO AMEND DIVISION ORDER NO.  
R-2268 AND ADMINISTRATIVE ORDERS  
WFX-585 AND WFX-587, EDDY COUNTY,  
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 2, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 14<sup>th</sup> day of June, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Socorro Petroleum Company, is the current operator of the Keel-West Waterflood Project which was originally approved by Division Order Nos. R-2268, R-2268-A and R-2268-B, and which encompasses, in part, Sections 3, 4, 9 and 10, Township 17 South, Range 31 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico.

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(3) The applicant seeks authority to expand said Keel-West Waterflood Project by converting its H. E. West "B" Well No. 24, located 660 feet from the North and East lines (Unit A) of Section 10, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico, from a producing oil well to a water injection well.

(4) By Order Nos. R-2268 (supplemental), WFX-585 and WFX-587, entered, respectively, October 7, 1989, August 31, 1989, and September 26, 1989, the Division authorized the expansion of said Keel-West Waterflood Project by the conversion of fifteen wells located in said Sections 3, 4, 9 and 10 to water injection wells. These orders further limited the surface injection pressure on said wells to 0.2 psi per foot of depth to the uppermost perforations or approximately 670 psi.

(5) The applicant also seeks authority, in the immediate case, to increase the surface injection pressure on said fifteen injection wells to approximately 450 psi above formation parting pressure as determined from step rate tests conducted on certain injection wells located within the project area. The applicant further seeks to increase the surface injection pressure on its proposed H. E. West "B" Well No. 24, as described above, to 450 psi above formation parting pressure.

(6) At the time of the hearing, the applicant requested that the portion of this case requesting the authority to convert its H. E. West "B" Well No. 24 to an injection well be dismissed inasmuch as a formal application to convert said well has been filed with the Division for administrative approval.

(7) The subject waterflood project was initiated in June, 1962, at which time the Division did not restrict the surface injection pressure on injection wells.

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(8) From inception to August, 1986, the former operator of the Keel-West Waterflood Project utilized some ten injection wells previously approved by said Order Nos. R-2268, R-2268-A, and R-2268-B, and located within said Sections 3, 4, 9 and 10, to inject water into the Grayburg and San Andres formations at surface injection pressures as high as 2500 psi.

(9) Decline curve analysis indicates that if sufficient volumes of water are injected into the Grayburg-Jackson Pool in this area, an estimated additional 1.48 million barrels of oil will be recovered.

(10) The evidence presented by the applicant indicates that sufficient volumes of water cannot be injected into the Grayburg-Jackson Pool by those fifteen subsequently approved injection wells at their currently authorized injection pressures.

(11) The applicant presented test data obtained from step rate injection tests conducted on nine of the fifteen subject injection wells which indicates that the average fracture pressure is approximately 1711 psi.

(12) The evidence presented further indicates that injection volumes limited to the formation fracture pressure as established by said step rate tests are not sufficient to recover the additional 1.48 million barrels of oil.

(13) The applicant, through its engineering evidence and testimony, has satisfactorily demonstrated that injection through the fifteen subject injection wells at a pressure of approximately 450 psi above formation fracture pressure is necessary in order to efficiently and effectively waterflood the area and will enable the applicant to recover the additional oil reserves within the Grayburg-Jackson Pool, thereby preventing waste.

(14) The applicant has further demonstrated that injection into the Grayburg and San Andres formations at said injection pressures should not result in the migration of injected water from the Grayburg-Jackson Pool.

(15) According to the evidence presented, there are no fresh water aquifers located above or below the Grayburg-Jackson Pool in this area.

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(16) Injection into the fifteen subject injection wells at a surface injection pressure of approximately 450 psi above formation fracture pressure will allow the recovery of additional oil reserves within the Grayburg-Jackson Pool, thereby preventing waste, will not endanger any fresh water aquifers, and should therefore be approved.

(17) The Division Director should have the authority to reduce or rescind said injection pressures should it become apparent that the injected fluid is not being adequately confined to the Grayburg-Jackson Pool.

(18) Inasmuch as the injection pressures authorized by this order are based upon the current formation fracture pressure, which, through continued injection, may increase, the Division Director should also have the authority to administratively increase the surface injection pressures on the fifteen subject injection wells, provided, however, that current step rate tests are accompanied by such request.

(19) Prior to authorizing the requested surface injection pressure for the proposed H. E. West "B" Well No. 24, the applicant should be required to demonstrate that said well has been approved for injection, and should further be required to conduct and submit a step rate test on said well.

IT IS THEREFORE ORDERED THAT:

(1) Division Order Nos. R-2268 (supplemental), WFX-585 and WFX-587 are hereby amended authorizing Socorro Petroleum Company to inject water into fifteen previously approved injection wells located within the Keel-West Waterflood Project in Sections 3, 4, 9 and 10, Township 17 South, Range 31 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico, at a surface injection pressure of approximately 450 psi above formation fracture pressure as shown on Exhibit "A" attached hereto.

(2) The Division Director shall have the authority to administratively approve subsequent pressure increases on said wells provided, however, that current step rate tests are accompanied by such requests.

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(3) The Division Director shall also have the authority to reduce or rescind said injection pressures should it become apparent that the injected fluid is not being adequately confined to the Grayburg-Jackson Pool.

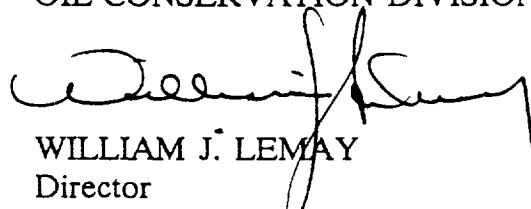
(4) The portion of this case requesting the expansion of the Keel West Waterflood Project by the conversion of the H. E. West "B" Well No. 24 located 660 feet from the North and East lines (Unit A) of Section 10, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico, to a water injection well is hereby dismissed.

(5) Prior to authorizing the requested surface injection pressure for said H. E. West "B" Well No. 24, the applicant shall be required to demonstrate that said well has been approved for injection, and shall further be required to conduct and submit a step rate injection test on said well.

(6) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

S E A L

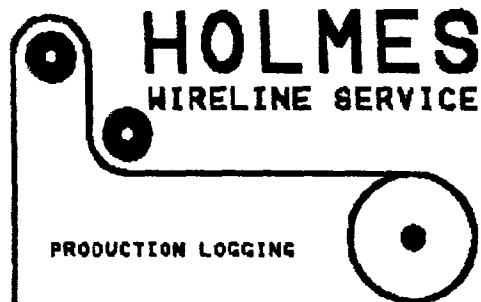
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EXHIBIT "A"  
DIVISION ORDER NO. R-2268-C

<u>WELL &amp; LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
H.E. West "A" No. 8 Unit E, Section 3, T-17S, R-31E	2407 PSIG
H.E. West "A" No. 9 Unit I, Section 4, T-17S, R-31E	2250 PSIG
H.E. West "A" No. 11 Unit G, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "A" No. 14 Unit O, Section 4, T-17S, R-31E	2160 PSIG
H.E. West "A" No. 15 Unit A, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 12 Unit G, Section 9, T-17S, R-31E	1872 PSIG
H.E. West "B" No. 13 Unit E, Section 10, T-17S, R-31E	2027 PSIG
H.E. West "B" No. 15 Unit G, Section 10, T-17S, R-31E	2236 PSIG
H.E. West "B" No. 16 Unit M, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 18 Unit O, Section 3, T-17S, R-31E	2000 PSIG

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<u>WELL &amp; LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
H.E. West "B" No. 20 Unit O, Section 10, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 21 Unit M, Section 10, T-17S, R-31E	2075 PSIG
H.E. West "B" No. 22Y Unit O, Section 9, T-17S, R-31E	2118 PSIG
H.E. West "B" No. 34 Unit I, Section 10, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 43 Unit M, Section 9, T-17S, R-31E	2470 PSIG



# Digital Data Acquisition System

COMPANY.....:SOCCORRO

WELL NAME/#...:WEST FED "B" # 24 WIW

FIELD.....:

COUNTY.....:EDDY

STATE...:NEW MEXICO

FILE NAME...:2SDCW24.

LOCATION.....:

BLOCK.....:

SECTION..:

PERM. DAT.....:GROUND LEVEL

ELEV.....:

L.M.F.:GROUND LEVEL

DATE.....: 6/20/1991

TYPE SURVEY...:STEP RATE TESTS

DEPTH DRILLER.:3877 +

DEPTH LOGGER.:T.D. @ 3338', R.D. 3330'

WELL STATUS...:INJECTION

HOLE FLUID....:WATER

INJ. RATE.....:0 - 1350 BPD

PROD: OIL bpd.:-

WATER bpd...:-

GAS mcf.:-

MAX. REC. TEMP:N/A

PRESS: TUBING.:240 - 1787 PSI

CASING.....:N/A

CASING SIZE...:5 1/2 @ 3604', 4"LIN @ 3273' -

DEPTH.....:N/A

TUBING SIZE...:2 3/8"

DEPTH.....:3338'

PACKER @.....:3338'

TUBING TAIL:N/A

TRUCK NO.....:T-104

TOOL SIZE...:1 1/2"

TOOL NO.:SIE PSI

RECORDED BY...:MONTY HOLMES, C. DUGGER

WITNESSED BY...:D.C.D. & PERRY HUGHES

ENGINEER.....:PERRY HUGHES

PERFORATIONS...:TOP : 3378'

: BOTTOM : 3877'

:

:

:

:

:

: N/A

: N/A

: N/A

HOLMES WIRELINE SERVICE, INC.  
End of Job Comments

UNABLE TO GET THROUGH PACKER AT 3338'. PRESSURES RECORDED AT 3330'.

RATE	SURF.PSI	BH.PSI
0	240	1755
150	439	2016
300	680	2236
450	894	2436
600 *	1178	2665
750	1348	2807
900	1491	2929
1050 *	1608	3030
1200	1696	3103
1350 *	1787	3176

POWER FAILURE AT 11:25 RESULTED IN TEMPORARY SHUT DOWN AT 600 BPD RATE. BEFORE RE-STARTING THE 600 BPD RATE, THE PRESSURES WERE RE-ESTABLISHED AT THE END OF THE 450 BPD STEP. THE TESTS WAS THEN CONTINUED AT THE 600 BPD RATE ,WITH NO HARMFUL EFFECTS ON THE RESULTS OF THE TEST.

POWER SURGE AT 15:37 RESULTED IN A CLOCK SKIP TO 16:09. NO INTERRUPTION IN THE STEP.

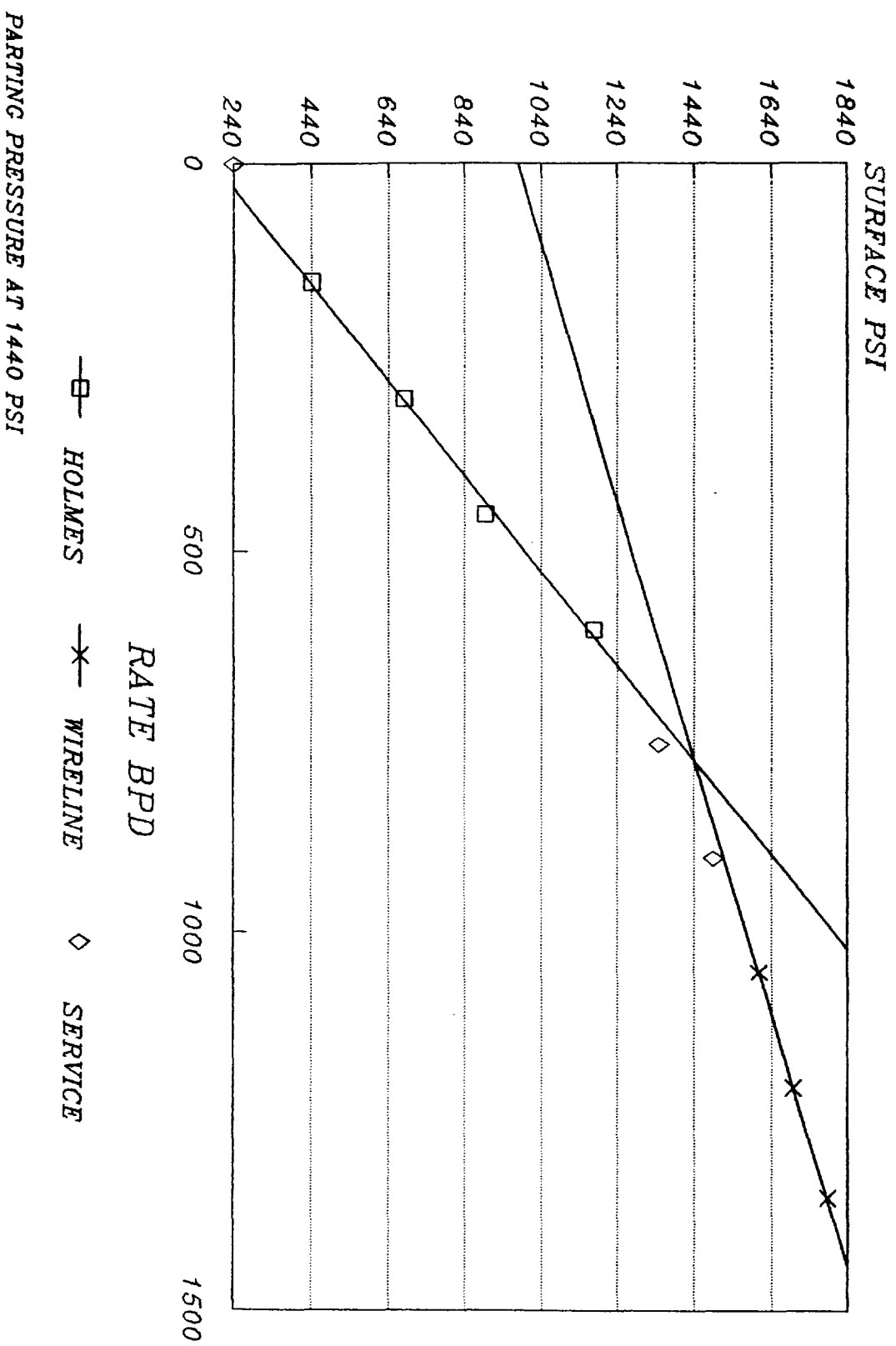
POWER FAILURE AT 17:03 CAUSED AT COMPUTER SHUT DOWN. HOWEVER, THE STEP RATE WAS CONTINUED TO 17:15 AS EXPECTED AND THE SURFACE PRESSURE GAUGE SHOWED 1760 PSI.

TO PROPERLY FINISH THE PLOTS THE SURFACE PRESSURES WERE CALCULATED AT THE 3 PSI PER MIN. GAIN TO ACHIEVE 1787 SURF.PSI.. THE BOTTOM HOLE PRESSURE WAS CALCULATED AT THE 2.5 PSI PER MIN GAIN TO ACHIEVE THE ENDING PRESSURE, AT 17:15, OF 3176 PSI.

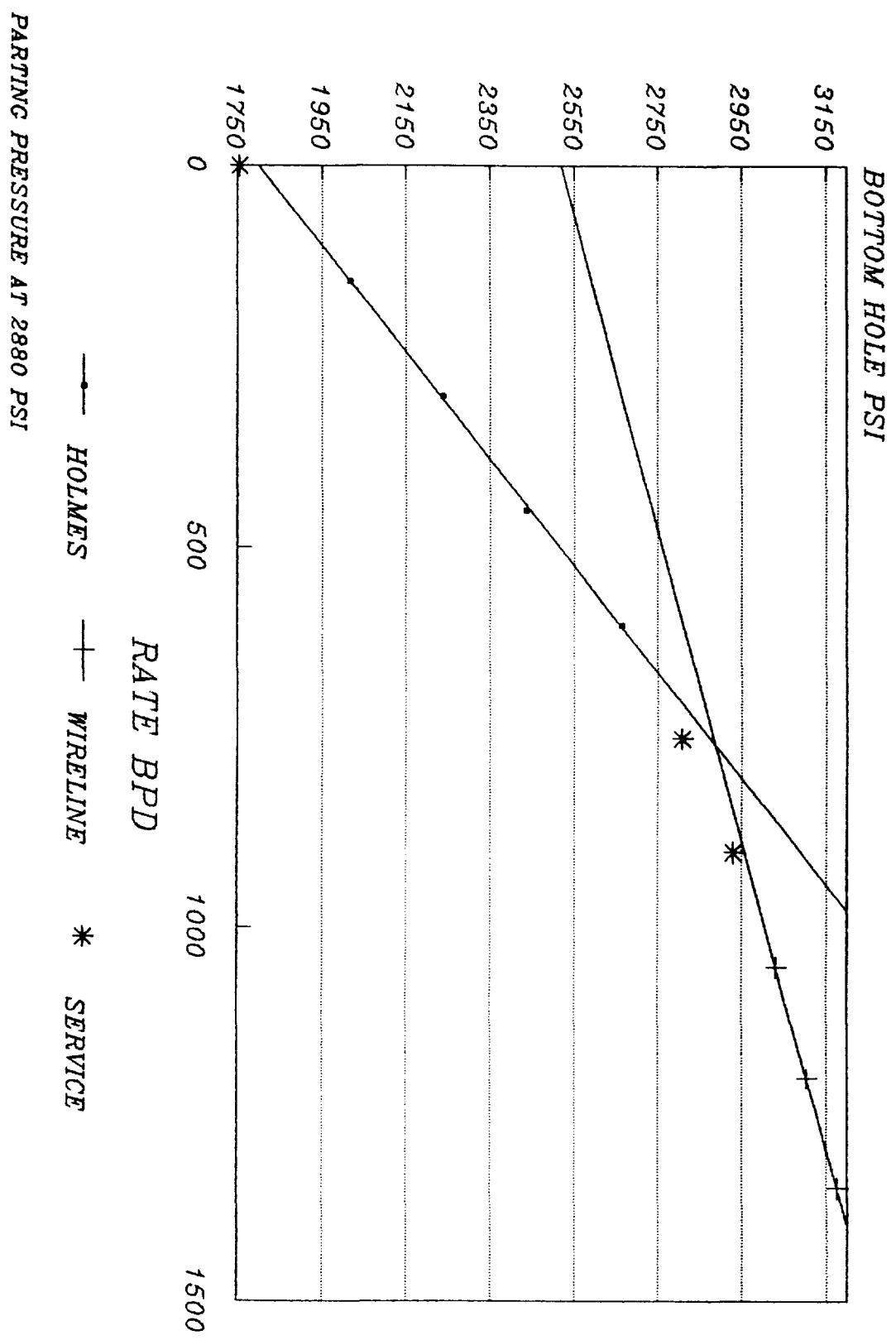
HOLMES WIRELINE FEELS THAT THE STEP RATE DATA AND CONCLUDING RESULTS ARE ACCURATE, SINCE THE TYPE OF PROBLEMS OCCURED WERE NOT DAMAGING TO THE INFORMATIO

THANKS!

# SOCORRO : WEST B # 24



# SOCORRO : WEST B # 24



## Volume Data

\* (last record = total volume)

Date	Time	Volume
6/18/1991	10:20:52	3.1957369 bb1
6/18/1991	10:50: 6	5.4600879 bb1
6/18/1991	11:20:20	9.2211914 bb1
6/18/1991	14:14:50	11.6033965 bb1
6/18/1991	14:44:56	15.3401693 bb1
6/18/1991	15:15: 1	18.6868625 bb1
6/18/1991	16:15:25	4.5312161 bb1
6/18/1991	16:45: 1	24.6548123 bb1
6/18/1991	14:14:50	11.6033965 bb1
6/18/1991	14:44:56	15.3401693 bb1
6/18/1991	15:15: 1	18.6868625 bb1
6/18/1991	16:15:25	4.5312161 bb1
6/18/1991	16:45: 1	24.6548123 bb1

Holmes Wireline Service, Inc.  
Well Test Data

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Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
9:30:59	0	929	0	81	0	0	0
9:36: 3	304	1647	718	81	0	0	0
9:41: 3	300	1693	46	82	1	0	0
9:46: 3	300	1727	34	82	0	0	0
9:51: 3	300	1766	39	80	-2	0	0
9:56: 3	300	1832	66	80	0	160	0
9:58:10	127	1852	20	81	1	153	240
9:58:25	15	1854	2	80	-1	153	260
9:58:40	15	1857	3	81	1	155	260
9:58:55	15	1857	0	80	-1	153	263
9:59:10	15	1862	5	81	1	153	269
9:59:25	15	1864	2	81	0	153	269
9:59:40	15	1866	2	79	-2	153	272
9:59:55	15	1866	0	82	3	153	275
10: 0:10	15	1869	3	80	-2	153	278
10: 0:25	15	1874	5	81	1	153	281
10: 0:40	15	1874	0	81	0	153	284
10: 0:55	15	1879	5	81	0	153	284
10: 1:10	15	1879	0	81	0	153	284
10: 1:25	15	1881	2	81	0	153	290
10: 1:40	15	1884	3	82	1	153	290
10: 1:55	15	1886	2	81	-1	153	292
10: 2:10	15	1886	0	79	-2	153	295
10: 2:25	15	1888	2	81	2	153	295
10: 2:40	15	1891	3	81	0	153	298
10: 2:55	15	1893	2	81	0	153	304
10: 3:10	15	1896	3	80	-1	153	307
10: 3:25	15	1896	0	81	1	153	307
10: 3:40	15	1901	5	80	-1	153	310
10: 3:55	15	1901	0	80	0	152	310
10: 4:10	15	1901	0	81	1	153	313
10: 4:25	15	1905	4	81	0	153	319
10: 4:40	15	1905	0	80	-1	153	319
10: 4:55	15	1908	3	80	0	153	322
10: 5:10	15	1913	5	80	0	153	322
10: 5:25	15	1913	0	81	1	152	325
10: 5:40	15	1915	2	79	-2	152	328
10: 5:55	15	1918	3	80	1	153	328
10: 6:10	15	1920	2	81	1	152	328
10: 6:25	15	1920	0	79	-2	153	331
10: 6:40	15	1925	5	80	1	151	336
10: 6:55	15	1925	0	81	1	150	339
10: 7:10	15	1927	2	81	0	150	339
10: 7:25	15	1932	5	80	-1	150	339
10: 7:40	15	1930	-2	81	1	150	342
10: 7:55	15	1935	5	80	-1	150	345
10: 8:10	15	1935	0	81	1	150	345
10: 8:25	15	1935	0	80	-1	150	348
10: 8:40	15	1937	2	80	0	150	351
10: 8:55	15	1940	3	80	0	150	354
10: 9:10	15	1942	2	80	0	150	354
10: 9:25	15	1942	0	80	0	150	357
10: 9:40	15	1945	3	79	-1	150	360
10: 9:55	15	1947	2	82	3	150	363
10:10:10	15	1949	2	79	-3	150	360
10:10:25	15	1952	3	81	2	150	366

Holmes Wireline Service, Inc.  
Well Test Data

Page 2

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
10:10:40	15	1952	0	81	0	150	366
10:10:55	15	1954	2	80	-1	150	369
10:11:10	15	1957	3	82	2	150	369
10:11:25	15	1959	2	79	-3	150	372
10:11:40	15	1962	3	79	0	150	375
10:11:55	15	1959	-3	80	1	150	377
10:12:10	15	1964	5	80	0	150	380
10:12:25	15	1964	0	82	2	150	380
10:12:40	15	1964	0	81	-1	150	383
10:12:55	15	1964	0	81	0	150	389
10:13:10	15	1969	5	79	-2	150	386
10:13:25	15	1971	2	80	1	150	392
10:13:40	15	1974	3	81	1	150	395
10:13:55	15	1974	0	80	-1	150	392
10:14:10	15	1974	0	81	1	150	395
10:14:25	15	1976	2	80	-1	148	401
10:14:40	15	1979	3	81	1	150	401
10:14:55	15	1979	0	82	1	150	401
10:15:10	15	1981	2	79	-3	150	404
10:15:25	15	1984	3	81	2	150	407
10:15:40	15	1986	2	80	-1	150	407
10:15:55	15	1986	0	80	0	150	407
10:16:10	15	1989	3	82	2	148	410
10:16:25	15	1991	2	81	-1	149	410
10:16:40	15	1991	0	80	-1	149	413
10:16:55	15	1993	2	81	1	150	416
10:17:10	15	1993	0	81	0	148	416
10:17:25	15	1996	3	80	-1	149	416
10:17:40	15	1998	2	80	0	148	418
10:17:55	15	2001	3	80	0	148	418
10:18:10	15	2001	0	80	0	148	421
10:18:25	15	2003	2	80	0	148	421
10:18:40	15	2003	0	80	0	149	424
10:18:55	15	2003	0	80	0	148	427
10:19:10	15	2006	3	79	-1	148	427
10:19:25	15	2008	2	80	1	148	430
10:19:40	15	2008	0	81	1	148	430
10:19:55	15	2010	2	79	-2	148	430
10:20:10	15	2010	0	81	2	148	433
10:20:25	15	2013	3	80	-1	148	436
10:20:40	15	2015	2	80	0	148	436
10:20:56	16	2015	0	81	1	148	439
10:21:11	15	2018	3	81	0	148	439
10:21:26	15	2020	2	82	1	148	445
10:21:41	15	2025	5	80	-2	336	448
10:21:56	15	2028	3	80	0	0	459
10:22:11	15	2032	4	81	1	0	462
10:22:26	15	2035	3	81	0	0	462
10:22:41	15	2040	5	81	0	0	468
10:22:56	15	2042	2	81	0	0	471
10:23:11	15	2047	5	79	-2	0	474
10:23:26	15	2050	3	80	1	99	477
10:23:41	15	2052	2	79	-1	0	480
10:23:56	15	2054	2	79	0	0	483
10:24:11	15	2059	5	81	2	322	486
10:24:26	15	2060	1	79	-1	---	---

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
10:24:41	15	2062	3	79	0	322	492
10:24:56	15	2064	2	80	1	322	495
10:25:11	15	2067	3	81	1	322	498
10:25:26	15	2067	0	79	-2	322	498
10:25:41	15	2072	5	81	2	319	503
10:25:56	15	2072	0	80	-1	298	506
10:26:11	15	2076	4	80	0	292	506
10:26:26	15	2079	3	79	-1	292	506
10:26:41	15	2079	0	79	0	292	509
10:26:56	15	2081	2	80	1	292	509
10:27:11	15	2084	3	80	0	292	515
10:27:26	15	2084	0	79	-1	292	515
10:27:41	15	2086	2	80	1	292	518
10:27:56	15	2089	3	80	0	292	521
10:28:11	15	2091	2	79	-1	292	524
10:28:26	15	2091	0	79	0	292	527
10:28:41	15	2094	3	81	2	292	530
10:28:56	15	2096	2	79	-2	292	530
10:29:11	15	2098	2	80	1	292	530
10:29:26	15	2101	3	80	0	292	536
10:29:41	15	2101	0	79	-1	292	536
10:29:56	15	2103	2	81	2	292	539
10:30:11	15	2106	3	79	-2	292	539
10:30:26	15	2108	2	80	1	292	544
10:30:41	15	2111	3	81	1	292	541
10:30:56	15	2111	0	80	-1	292	547
10:31:11	15	2113	2	81	1	292	547
10:31:26	15	2115	2	79	-2	292	547
10:31:41	15	2118	3	81	2	292	553
10:31:56	15	2118	0	79	-2	292	550
10:32:11	15	2120	2	79	0	292	553
10:32:26	15	2123	3	81	2	292	559
10:32:41	15	2123	0	80	-1	292	559
10:32:56	15	2125	2	81	1	292	562
10:33:11	15	2128	3	80	-1	292	562
10:33:26	15	2130	2	79	-1	292	565
10:33:41	15	2133	3	81	2	292	568
10:33:56	15	2133	0	79	-2	292	568
10:34:11	15	2137	4	79	0	292	571
10:34:26	15	2137	0	80	1	292	571
10:34:41	15	2137	0	79	-1	292	577
10:34:56	15	2140	3	79	0	292	577
10:35:11	15	2142	2	79	0	292	577
10:35:26	15	2145	3	79	0	292	583
10:35:41	15	2145	0	80	1	292	583
10:35:56	15	2147	2	79	-1	290	585
10:36:11	15	2150	3	79	0	292	585
10:36:26	15	2150	0	79	0	272	588
10:36:41	15	2152	2	79	0	284	588
10:36:56	15	2155	3	80	1	287	591
10:37:11	15	2157	2	79	-1	266	591
10:37:26	15	2155	-2	80	1	272	594
10:37:41	15	2159	4	80	0	272	597
10:37:56	15	2159	0	78	-2	266	597
10:38:11	15	2159	0	79	1	272	600
10:38:26	15	2162	3	80	1	292	606

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
10:38:41	15	2167	5	81	1	292	603
10:38:56	15	2167	0	81	0	292	606
10:39:11	15	2169	2	79	-2	292	609
10:39:26	15	2172	3	80	1	292	609
10:39:41	15	2172	0	79	-1	292	612
10:39:56	15	2174	2	79	0	292	612
10:40:11	15	2177	3	79	0	292	615
10:40:26	15	2179	2	79	0	292	618
10:40:41	15	2179	0	80	1	292	618
10:40:56	15	2181	2	81	1	292	618
10:41:11	15	2179	-2	79	-2	292	621
10:41:26	15	2181	2	80	1	292	621
10:41:41	15	2184	3	79	-1	292	624
10:41:56	15	2186	2	78	-1	292	629
10:42:11	15	2186	0	80	2	292	626
10:42:26	15	2189	3	80	0	292	626
10:42:41	15	2191	2	79	-1	292	629
10:42:56	15	2194	3	79	0	292	632
10:43:11	15	2194	0	79	0	292	632
10:43:26	15	2196	2	79	0	292	635
10:43:41	15	2199	3	80	1	292	635
10:43:56	15	2199	0	80	0	292	641
10:44:11	15	2201	2	79	-1	292	641
10:44:26	15	2201	0	79	0	292	644
10:44:41	15	2203	2	79	0	292	644
10:44:56	15	2203	0	79	0	263	644
10:45:11	15	2206	3	79	0	263	647
10:45:26	15	2206	0	80	1	278	650
10:45:41	15	2208	2	80	0	263	653
10:45:56	15	2211	3	79	-1	263	650
10:46:11	15	2213	2	81	2	263	656
10:46:26	15	2213	0	80	-1	263	653
10:46:41	15	2216	3	79	-1	263	656
10:46:56	15	2216	0	79	0	266	659
10:47:11	15	2218	2	80	1	287	659
10:47:26	15	2221	3	79	-1	292	659
10:47:41	15	2221	0	79	0	292	659
10:47:56	15	2223	2	79	0	292	665
10:48:11	15	2225	2	80	1	292	665
10:48:26	15	2225	0	78	-2	292	667
10:48:41	15	2225	0	80	2	292	667
10:48:56	15	2228	3	80	0	292	670
10:49:11	15	2228	0	80	0	292	670
10:49:26	15	2230	2	79	-1	292	676
10:49:41	15	2233	3	79	0	292	676
10:49:56	15	2233	0	79	0	292	676
10:50:11	15	2235	2	80	1	292	676
10:50:26	15	2240	5	80	0	468	688
10:50:41	15	2242	2	80	0	410	688
10:50:56	15	2245	3	78	-2	439	694
10:51:11	15	2247	2	79	1	433	697
10:51:26	15	2250	3	79	0	439	697
10:51:41	15	2252	2	79	0	439	700
10:51:56	15	2255	3	80	1	439	706
10:52:11	15	2257	2	80	0	439	700
10:52:26	15	2257	0	79	-1	439	706

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
10:52:41	15	2264	7	80	1	439	708
10:52:56	15	2262	-2	80	0	439	711
10:53:11	15	2267	5	80	0	439	714
10:53:26	15	2267	0	80	0	439	714
10:53:41	15	2267	0	79	-1	439	720
10:53:56	15	2269	2	78	-1	439	720
10:54:11	15	2272	3	79	1	439	723
10:54:26	15	2274	2	78	-1	439	726
10:54:41	15	2277	3	80	2	439	726
10:54:56	15	2279	2	80	0	439	729
10:55:11	15	2282	3	80	0	439	729
10:55:26	15	2282	0	78	-2	439	729
10:55:41	15	2286	4	80	2	439	735
10:55:56	15	2286	0	80	0	439	735
10:56:11	15	2291	5	79	-1	439	738
10:56:26	15	2291	0	78	-1	439	741
10:56:41	15	2291	0	80	2	439	744
10:56:56	15	2294	3	79	-1	439	744
10:57:11	15	2296	2	79	0	439	747
10:57:26	15	2296	0	78	-1	439	750
10:57:41	15	2299	3	78	0	439	752
10:57:56	15	2301	2	80	2	439	752
10:58:11	15	2304	3	79	-1	439	755
10:58:26	15	2306	2	78	-1	439	758
10:58:41	15	2308	2	80	2	439	755
10:58:56	15	2308	0	80	0	439	758
10:59:11	15	2311	3	78	-2	439	764
10:59:26	15	2311	0	80	2	439	764
10:59:41	15	2316	5	80	0	439	764
10:59:56	15	2316	0	80	0	439	764
11: 0:11	15	2318	2	79	-1	439	770
11: 0:26	15	2318	0	80	1	439	770
11: 0:41	15	2318	0	79	-1	436	773
11: 0:56	15	2323	5	79	0	439	776
11: 1:11	15	2323	0	78	-1	436	776
11: 1:26	15	2326	3	79	1	418	779
11: 1:41	15	2326	0	78	-1	439	779
11: 1:56	15	2330	4	79	1	430	782
11: 2:11	15	2330	0	80	1	439	779
11: 2:26	15	2333	3	80	0	433	782
11: 2:41	15	2333	0	79	-1	413	785
11: 2:56	15	2335	2	79	0	439	788
11: 3:11	15	2338	3	78	-1	424	788
11: 3:26	15	2338	0	80	2	410	788
11: 3:41	15	2340	2	78	-2	413	791
11: 3:56	15	2343	3	79	1	410	793
11: 4:11	15	2345	2	80	1	416	793
11: 4:26	15	2345	0	78	-2	413	793
11: 4:41	15	2347	2	80	2	457	799
11: 4:56	15	2350	3	78	-2	468	799
11: 5:11	15	2350	0	78	0	468	802
11: 5:26	15	2352	2	79	1	468	805
11: 5:41	15	2355	3	80	1	468	802
11: 5:56	15	2355	0	79	-1	439	805
11: 6:11	15	2357	2	79	0	439	808
11: 6:26	15	2357	0	78	-1	439	808

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Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
11: 6:41	15	2362	5	78	0	439	811
11: 6:56	15	2362	0	78	0	439	811
11: 7:11	15	2365	3	78	0	439	814
11: 7:26	15	2365	0	79	1	439	817
11: 7:41	15	2367	2	78	-1	439	817
11: 7:56	15	2369	2	79	1	439	820
11: 8:11	15	2369	0	80	1	439	820
11: 8:26	15	2372	3	79	-1	439	823
11: 8:41	15	2374	2	80	1	439	823
11: 8:56	15	2374	0	80	0	439	826
11: 9:11	15	2377	3	80	0	439	826
11: 9:26	15	2377	0	79	-1	439	826
11: 9:41	15	2382	5	79	0	439	829
11: 9:56	15	2379	-3	78	-1	439	832
11:10:11	15	2382	3	80	2	439	832
11:10:26	15	2382	0	80	0	439	834
11:10:41	15	2384	2	77	-3	439	834
11:10:56	15	2384	0	80	3	439	837
11:11:11	15	2387	3	78	-2	439	840
11:11:26	15	2389	2	80	2	439	837
11:11:41	15	2389	0	79	-1	439	843
11:11:56	15	2391	2	78	-1	439	843
11:12:11	15	2394	3	80	2	439	846
11:12:26	15	2394	0	80	0	439	846
11:12:41	15	2394	0	77	-3	439	846
11:12:56	15	2396	2	80	3	439	849
11:13:11	15	2399	3	78	-2	439	849
11:13:26	15	2401	2	78	0	439	852
11:13:41	15	2401	0	79	1	439	852
11:13:56	15	2404	3	80	1	439	855
11:14:11	15	2404	0	78	-2	439	858
11:14:26	15	2406	2	78	0	439	858
11:14:41	15	2406	0	78	0	439	861
11:14:56	15	2406	0	77	-1	439	864
11:15:11	15	2409	3	78	1	439	864
11:15:26	15	2411	2	78	0	439	867
11:15:41	15	2413	2	78	0	439	867
11:15:56	15	2413	0	79	1	439	867
11:16:11	15	2416	3	79	0	439	867
11:16:26	15	2416	0	78	-1	439	870
11:16:41	15	2418	2	79	1	439	870
11:16:56	15	2421	3	79	0	439	870
11:17:11	15	2421	0	80	1	439	873
11:17:26	15	2423	2	77	-3	439	875
11:17:41	15	2423	0	78	1	439	873
11:17:56	15	2426	3	80	2	439	878
11:18:11	15	2426	0	80	0	439	878
11:18:26	15	2426	0	79	-1	439	881
11:18:41	15	2428	2	80	1	439	881
11:18:56	15	2431	3	78	-2	439	884
11:19:11	15	2431	0	78	0	439	881
11:19:26	15	2433	2	79	1	439	887
11:19:41	15	2433	0	80	1	439	890
11:19:56	15	2435	2	79	-1	439	890
11:20:11	15	2433	-2	77	-2	439	890
11:20:26	15	2438	5	79	2	439	893

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
11:20:41	15	2440	2	78	-1	744	887
11:20:56	15	2443	3	78	0	615	908
11:21:11	15	2445	2	79	1	585	905
11:21:26	15	2450	5	78	-1	556	908
11:21:41	15	2452	2	79	1	615	914
11:21:56	15	2452	0	78	-1	621	916
11:22:11	15	2455	3	79	1	615	919
11:22:26	15	2460	5	78	-1	615	916
11:22:41	15	2460	0	79	1	585	919
11:22:56	15	2460	0	79	0	585	925
11:23:11	15	2465	5	78	-1	585	928
11:23:26	15	2465	0	79	1	585	928
11:23:41	15	2467	2	78	-1	585	928
11:23:56	15	2467	0	77	-1	585	931
11:24:11	15	2470	3	79	2	585	934
11:24:26	15	2472	2	79	0	585	937
11:24:41	15	2472	0	78	-1	585	937
13:33:56	7755	2531	59	80	2	585	940
13:34:11	15	2533	2	80	0	0	955
13:34:26	15	2536	3	80	0	0	958
13:34:41	15	2536	0	81	1	0	955
13:34:56	15	2536	0	80	-1	0	958
13:35:11	15	2538	2	81	1	0	958
13:35:26	15	2536	-2	80	-1	0	955
13:35:41	15	2536	0	82	2	0	960
13:35:56	15	2536	0	81	-1	0	958
13:36:11	15	2536	0	80	-1	0	958
13:36:26	15	2536	0	80	0	0	958
13:36:41	15	2536	0	82	2	0	958
13:36:56	15	2533	-3	82	0	0	958
13:37:11	15	2533	0	80	-2	0	958
13:37:26	15	2531	-2	80	0	0	960
13:37:41	15	2528	-3	81	1	0	958
13:37:56	15	2523	-5	82	1	0	963
13:38:11	15	2518	-5	80	-2	0	949
13:38:26	15	2516	-2	80	0	0	952
13:38:41	15	2514	-2	80	0	0	946
13:38:56	15	2511	-3	80	0	0	946
13:39:11	15	2509	-2	80	0	0	943
13:39:26	15	2504	-5	79	-1	0	943
13:39:41	15	2499	-5	81	2	0	931
13:39:56	15	2494	-5	80	-1	0	928
13:40:11	15	2489	-5	80	0	0	925
13:40:26	15	2487	-2	80	0	0	922
13:40:41	15	2484	-3	79	-1	0	916
13:40:56	15	2477	-7	80	1	0	916
13:41:11	15	2472	-5	81	1	0	916
13:41:26	15	2467	-5	81	0	0	902
13:41:41	15	2465	-2	81	0	0	899
13:41:56	15	2457	-8	81	0	0	896
13:42:11	15	2455	-2	80	-1	0	890
13:42:26	15	2452	-3	80	0	0	890
13:42:41	15	2445	-7	82	2	0	887
13:42:56	15	2443	-2	79	-3	0	893
13:43:11	15	2443	0	82	3	0	887
13:43:26	15	2438	-5	82	0	0	884

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Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
13:43:41	15	2435	-3	81	-1	0	881
13:43:56	15	2433	-2	80	-1	0	878
13:44:11	15	2428	-5	81	1	0	875
13:44:26	15	2428	0	79	-2	0	875
13:44:41	15	2426	-2	81	2	0	873
13:44:59	18	2423	-3	81	0	0	873
13:45:14	15	2421	-2	80	-1	0	870
13:45:29	15	2426	5	80	0	0	817
13:45:44	15	2428	2	79	-1	0	905
13:45:59	15	2428	0	80	1	0	902
13:46:14	15	2433	5	79	-1	0	899
13:46:29	15	2440	7	79	0	0	890
13:46:44	15	2450	10	80	1	0	922
13:46:59	15	2457	7	80	0	585	934
13:47:14	15	2462	5	79	-1	615	937
13:47:29	15	2470	8	80	1	615	952
13:47:44	15	2472	2	80	0	615	955
13:47:59	15	2477	5	79	-1	615	963
13:48:14	15	2482	5	79	0	615	969
13:48:29	15	2487	5	79	0	615	972
13:48:44	15	2489	2	79	0	585	975
13:48:59	15	2494	5	80	1	585	978
13:49:14	15	2499	5	79	-1	585	984
13:49:29	15	2499	0	79	0	585	987
13:49:44	15	2506	7	80	1	585	990
13:49:59	15	2506	0	80	0	585	996
13:50:14	15	2511	5	80	0	585	993
13:50:29	15	2516	5	80	0	585	999
13:50:44	15	2518	2	79	-1	583	1001
13:50:59	15	2518	0	78	-1	585	1007
13:51:14	15	2523	5	80	2	583	1007
13:51:29	15	2523	0	78	-2	556	1010
13:51:44	15	2526	3	78	0	556	1013
13:51:59	15	2526	0	78	0	556	1013
13:52:14	15	2531	5	80	2	556	1016
13:52:29	15	2531	0	78	-2	556	1019
13:52:44	15	2538	7	79	1	615	1025
13:52:59	15	2536	-2	79	0	615	1028
13:53:14	15	2540	4	80	1	615	1031
13:53:29	15	2540	0	78	-2	556	1031
13:53:44	15	2543	3	78	0	556	1034
13:53:59	15	2545	2	78	0	585	1040
13:54:14	15	2545	0	79	1	615	1040
13:54:29	15	2550	5	78	-1	603	1042
13:54:44	15	2553	3	79	1	585	1045
13:54:59	15	2555	2	78	-1	585	1045
13:55:14	15	2557	2	78	0	585	1048
13:55:29	15	2557	0	78	0	585	1054
13:55:44	15	2557	0	78	0	585	1054
13:55:59	15	2560	3	78	0	585	1057
13:56:14	15	2562	2	79	1	583	1060
13:56:29	15	2562	0	78	-1	585	1063
13:56:44	15	2565	3	78	0	632	1066
13:56:59	15	2567	2	79	1	612	1069
13:57:14	15	2570	3	78	-1	585	1072
13:57:29	15	2572	2	79	1	585	1072

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Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
13:57:44	15	2572	0	79	0	585	1072
13:57:59	15	2575	3	77	-2	585	1075
13:58:14	15	2577	2	78	1	585	1081
13:58:29	15	2577	0	78	0	585	1081
13:58:44	15	2579	2	78	0	585	1081
13:58:59	15	2582	3	79	1	577	1083
13:59:14	15	2579	-3	79	0	556	1083
13:59:29	15	2584	5	78	-1	556	1086
13:59:44	15	2584	0	79	1	556	1089
13:59:59	15	2587	3	78	-1	644	1089
14: 0:14	15	2589	2	77	-1	615	1092
14: 0:29	15	2589	0	78	1	662	1092
14: 0:44	15	2592	3	79	1	644	1104
14: 0:59	15	2597	5	78	-1	650	1101
14: 1:14	15	2597	0	78	0	665	1104
14: 1:29	15	2597	0	78	0	644	1110
14: 1:44	15	2599	2	79	1	644	1110
14: 1:59	15	2604	5	77	-2	644	1113
14: 2:14	15	2604	0	78	1	644	1113
14: 2:29	15	2604	0	79	1	761	1142
14: 2:44	15	2604	0	77	-2	615	1116
14: 2:59	15	2606	2	78	1	615	1119
14: 3:14	15	2609	3	78	0	615	1116
14: 3:29	15	2611	2	78	0	615	1116
14: 3:44	15	2614	3	78	0	585	1116
14: 3:59	15	2616	2	79	1	585	1122
14: 4:14	15	2616	0	78	-1	585	1125
14: 4:29	15	2619	3	78	0	585	1125
14: 4:44	15	2619	0	79	1	585	1127
14: 4:59	15	2619	0	78	-1	588	1125
14: 5:14	15	2619	0	79	1	585	1125
14: 5:29	15	2621	2	77	-2	585	1130
14: 5:44	15	2626	5	78	1	585	1130
14: 5:59	15	2623	-3	78	0	585	1133
14: 6:14	15	2626	3	77	-1	585	1136
14: 6:29	15	2628	2	79	2	585	1136
14: 6:44	15	2628	0	77	-2	585	1139
14: 6:59	15	2628	0	79	2	585	1139
14: 7:14	15	2633	5	77	-2	585	1139
14: 7:29	15	2633	0	78	1	585	1139
14: 7:44	15	2636	3	77	-1	585	1142
14: 7:59	15	2636	0	78	1	585	1142
14: 8:14	15	2636	0	77	-1	585	1142
14: 8:29	15	2636	0	78	1	585	1142
14: 8:44	15	2638	2	79	1	585	1142
14: 8:59	15	2638	0	76	-3	585	1145
14: 9:14	15	2641	3	77	1	585	1148
14: 9:29	15	2641	0	78	1	585	1148
14: 9:44	15	2643	2	78	0	585	1151
14: 9:59	15	2643	0	77	-1	585	1154
14:10:14	15	2645	2	79	2	585	1154
14:10:29	15	2643	-2	77	-2	585	1157
14:10:44	15	2645	2	78	1	585	1160
14:10:59	15	2650	5	77	-1	585	1160
14:11:14	15	2650	0	76	-1	585	1160
14:11:29	15	2653	3	77	1	585	1163

## Well Test Data

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
14:11:44	15	2650	-3	78	1	585	1163
14:11:59	15	2655	5	76	-2	585	1166
14:12:14	15	2655	0	79	3	585	1163
14:12:29	15	2655	0	77	-2	585	1171
14:12:44	15	2655	0	78	1	585	1168
14:12:59	15	2658	3	77	-1	585	1168
14:13:14	15	2658	0	77	0	585	1171
14:13:29	15	2658	0	76	-1	585	1171
14:13:44	15	2660	2	78	2	585	1174
14:13:59	15	2660	0	78	0	585	1174
14:14:14	15	2663	3	78	0	585	1174
14:14:29	15	2663	0	77	-1	585	1177
14:14:44	15	2663	0	77	0	585	1177
14:15: 0	16	2667	4	78	1	585	1180
14:15:15	15	2670	3	77	-1	644	1186
14:15:30	15	2670	0	76	-1	761	1195
14:15:45	15	2675	5	78	2	732	1195
14:16: 0	15	2675	0	77	-1	732	1195
14:16:15	15	2675	0	76	-1	732	1198
14:16:30	15	2677	2	77	1	732	1198
14:16:45	15	2680	3	78	1	732	1201
14:17: 0	15	2682	2	78	0	732	1204
14:17:15	15	2684	2	79	1	791	1207
14:17:30	15	2687	3	77	-2	761	1209
14:17:45	15	2687	0	77	0	755	1207
14:18: 0	15	2689	2	77	0	747	1209
14:18:15	15	2689	0	77	0	738	1212
14:18:30	15	2692	3	79	2	732	1212
14:18:45	15	2694	2	78	-1	732	1215
14:19: 0	15	2697	3	76	-2	732	1218
14:19:15	15	2697	0	77	1	732	1218
14:19:30	15	2697	0	78	1	732	1221
14:19:45	15	2699	2	78	0	738	1224
14:20: 0	15	2699	0	78	0	732	1221
14:20:15	15	2699	0	79	1	732	1227
14:20:30	15	2704	5	76	-3	732	1230
14:20:45	15	2704	0	78	2	732	1233
14:21: 0	15	2706	2	78	0	732	1230
14:21:15	15	2706	0	77	-1	732	1233
14:21:30	15	2706	0	78	1	732	1233
14:21:45	15	2709	3	76	-2	732	1233
14:22: 0	15	2709	0	77	1	732	1239
14:22:15	15	2714	5	76	-1	732	1239
14:22:30	15	2714	0	78	2	732	1242
14:22:45	15	2714	0	77	-1	732	1239
14:23: 0	15	2716	2	76	-1	732	1242
14:23:15	15	2716	0	77	1	732	1242
14:23:30	15	2719	3	77	0	732	1245
14:23:45	15	2719	0	76	-1	732	1245
14:24: 0	15	2721	2	77	1	732	1248
14:24:15	15	2721	0	76	-1	732	1248
14:24:30	15	2721	0	77	1	732	1250
14:24:45	15	2724	3	77	0	732	1248
14:25: 0	15	2726	2	77	0	732	1253
14:25:15	15	2726	0	78	1	732	1253
14:25:30	15	2728	2	76	-2	732	1253

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
14:25:45	15	2731	3	76	0	732	1253
14:26: 0	15	2731	0	76	0	732	1256
14:26:15	15	2731	0	78	2	732	1256
14:26:30	15	2733	2	77	-1	732	1259
14:26:45	15	2733	0	76	-1	732	1259
14:27: 0	15	2736	3	78	2	732	1262
14:27:15	15	2736	0	76	-2	732	1262
14:27:30	15	2738	2	76	0	732	1265
14:27:45	15	2738	0	76	0	732	1268
14:28: 0	15	2741	3	76	0	732	1268
14:28:15	15	2741	0	76	0	732	1268
14:28:30	15	2741	0	77	1	732	1271
14:28:45	15	2743	2	77	0	732	1274
14:29: 0	15	2746	3	76	-1	732	1274
14:29:15	15	2746	0	78	2	732	1274
14:29:30	15	2746	0	77	-1	732	1280
14:29:45	15	2748	2	76	-1	732	1280
14:30: 0	15	2748	0	76	0	732	1280
14:30:15	15	2748	0	76	0	732	1280
14:30:30	15	2750	2	78	2	732	1283
14:30:45	15	2753	3	76	-2	732	1286
14:31: 0	15	2753	0	77	1	732	1286
14:31:15	15	2753	0	78	1	732	1289
14:31:30	15	2755	2	76	-2	729	1289
14:31:45	15	2755	0	77	1	729	1291
14:32: 0	15	2755	0	78	1	711	1291
14:32:15	15	2755	0	76	-2	714	1291
14:32:30	15	2758	3	78	2	711	1291
14:32:45	15	2760	2	78	0	761	1294
14:33: 0	15	2760	0	76	-2	761	1294
14:33:15	15	2760	0	78	2	761	1300
14:33:30	15	2763	3	76	-2	761	1297
14:33:45	15	2763	0	77	1	761	1300
14:34: 0	15	2765	2	76	-1	738	1300
14:34:15	15	2765	0	75	-1	735	1303
14:34:30	15	2765	0	76	1	735	1303
14:34:45	15	2768	3	78	2	735	1303
14:35: 0	15	2770	2	77	-1	738	1306
14:35:15	15	2770	0	77	0	738	1306
14:35:30	15	2770	0	78	1	732	1309
14:35:45	15	2772	2	76	-2	732	1309
14:36: 0	15	2772	0	76	0	732	1309
14:36:15	15	2775	3	76	0	732	1309
14:36:30	15	2775	0	76	0	732	1309
14:36:45	15	2777	2	76	0	732	1312
14:37: 0	15	2777	0	76	0	732	1315
14:37:15	15	2777	0	77	1	732	1315
14:37:30	15	2780	3	77	0	732	1312
14:37:45	15	2780	0	78	1	732	1315
14:38: 0	15	2782	2	76	-2	732	1315
14:38:15	15	2780	-2	76	0	732	1315
14:38:30	15	2780	0	76	0	732	1318
14:38:45	15	2780	0	78	2	732	1318
14:39: 0	15	2782	2	77	-1	732	1318
14:39:15	15	2787	5	77	0	732	1321
14:39:30	15	2787	0	77	0	732	1321

## Well Test Data

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
14:39:45	15	2787	0	75	-2	732	1324
14:40: 0	15	2789	2	78	3	732	1327
14:40:15	15	2792	3	77	-1	732	1327
14:40:30	15	2792	0	78	1	732	1327
14:40:45	15	2792	0	76	-2	732	1327
14:41: 0	15	2792	0	76	0	732	1330
14:41:15	15	2792	0	75	-1	732	1333
14:41:30	15	2794	2	76	1	732	1330
14:41:45	15	2797	3	78	2	732	1333
14:42: 0	15	2797	0	77	-1	732	1333
14:42:15	15	2797	0	77	0	732	1335
14:42:30	15	2799	2	76	-1	732	1335
14:42:45	15	2799	0	76	0	732	1335
14:43: 0	15	2799	0	76	0	732	1335
14:43:15	15	2804	5	76	0	732	1338
14:43:30	15	2802	-2	77	1	732	1338
14:43:45	15	2802	0	77	0	732	1338
14:44: 0	15	2804	2	76	-1	732	1344
14:44:15	15	2804	0	78	2	732	1344
14:44:30	15	2804	0	78	0	732	1347
14:44:45	15	2807	3	75	-3	732	1344
14:45: 0	15	2807	0	77	2	732	1347
14:45:15	15	2811	4	75	-2	732	1347
14:45:30	15	2811	0	76	1	922	1359
14:45:45	15	2814	3	76	0	908	1362
14:46: 0	15	2816	2	77	1	908	1362
14:46:15	15	2819	3	78	1	908	1365
14:46:30	15	2819	0	75	-3	908	1365
14:46:45	15	2819	0	75	0	908	1368
14:47: 0	15	2819	0	76	1	908	1371
14:47:21	21	2824	5	76	0	908	1371
14:47:36	15	2824	0	76	0	908	1374
14:47:51	15	2824	0	76	0	908	1374
14:48: 6	15	2829	5	77	1	908	1376
14:48:21	15	2829	0	75	-2	905	1376
14:48:36	15	2831	2	77	2	908	1379
14:48:51	15	2831	0	76	-1	905	1382
14:49: 6	15	2831	0	78	2	893	1382
14:49:21	15	2833	2	76	-2	878	1385
14:49:36	15	2833	0	76	0	896	1388
14:49:51	15	2833	0	77	1	908	1394
14:50: 6	15	2836	3	78	1	908	1391
14:50:21	15	2836	0	76	-2	908	1394
14:50:36	15	2838	2	75	-1	908	1394
14:50:51	15	2838	0	76	1	878	1397
14:51: 6	15	2841	3	75	-1	878	1400
14:51:21	15	2841	0	77	2	908	1400
14:51:36	15	2843	2	77	0	908	1400
14:51:51	15	2843	0	77	0	908	1400
14:52: 6	15	2846	3	76	-1	908	1406
14:52:21	15	2846	0	75	-1	908	1406
14:52:36	15	2848	2	75	0	908	1406
14:52:51	15	2848	0	76	1	908	1406
14:53: 6	15	2848	0	77	1	908	1406
14:53:21	15	2848	0	76	-1	908	1406
14:53:36	15	2853	5	75	-1	908	1409

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
14:53:51	15	2851	-2	76	1	908	1409
14:54: 6	15	2853	2	77	1	905	1409
14:54:21	15	2853	0	75	-2	893	1412
14:54:36	15	2855	2	76	1	899	1412
14:54:51	15	2855	0	77	1	887	1412
14:55: 6	15	2855	0	75	-2	884	1415
14:55:21	15	2858	3	77	2	878	1412
14:55:36	15	2860	2	77	0	908	1415
14:55:51	15	2860	0	76	-1	908	1417
14:56: 6	15	2863	3	76	0	908	1420
14:56:21	15	2863	0	76	0	908	1420
14:56:36	15	2863	0	76	0	908	1420
14:56:51	15	2863	0	75	-1	896	1420
14:57: 6	15	2865	2	76	1	884	1420
14:57:21	15	2865	0	77	1	878	1420
14:57:36	15	2868	3	76	-1	878	1423
14:57:51	15	2870	2	76	0	878	1423
14:58: 6	15	2868	-2	76	0	878	1423
14:58:21	15	2870	2	76	0	878	1429
14:58:36	15	2870	0	77	1	878	1429
14:58:51	15	2870	0	77	0	878	1429
14:59: 6	15	2873	3	76	-1	878	1432
14:59:21	15	2870	-3	77	1	878	1432
14:59:36	15	2873	3	76	-1	878	1435
14:59:51	15	2873	0	75	-1	878	1438
15: 0: 6	15	2875	2	76	1	878	1435
15: 0:21	15	2877	2	77	1	878	1435
15: 0:36	15	2877	0	76	-1	878	1438
15: 0:51	15	2877	0	77	1	878	1438
15: 1: 6	15	2880	3	76	-1	878	1438
15: 1:21	15	2880	0	75	-1	878	1444
15: 1:36	15	2882	2	77	2	878	1441
15: 1:51	15	2882	0	75	-2	905	1444
15: 2: 6	15	2882	0	77	2	908	1444
15: 2:21	15	2885	3	75	-2	902	1444
15: 2:36	15	2887	2	75	0	908	1444
15: 2:51	15	2885	-2	76	1	908	1444
15: 3: 6	15	2887	2	77	1	878	1444
15: 3:21	15	2887	0	76	-1	878	1447
15: 3:36	15	2890	3	76	0	908	1450
15: 3:51	15	2890	0	77	1	908	1450
15: 4: 6	15	2890	0	77	0	878	1450
15: 4:21	15	2892	2	77	0	878	1447
15: 4:36	15	2894	2	78	1	908	1453
15: 4:51	15	2892	-2	75	-3	908	1456
15: 5: 6	15	2894	2	77	2	908	1456
15: 5:21	15	2897	3	75	-2	908	1456
15: 5:36	15	2897	0	76	1	908	1456
15: 5:51	15	2897	0	77	1	908	1453
15: 6: 6	15	2897	0	76	-1	908	1456
15: 6:21	15	2897	0	75	-1	908	1456
15: 6:36	15	2902	5	76	1	908	1456
15: 6:51	15	2902	0	75	-1	908	1456
15: 7: 6	15	2902	0	77	2	908	1458
15: 7:21	15	2902	0	76	-1	908	1456
15: 7:36	15	2904	2	75	-1	908	1458

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
15: 7:51	15	2904	0	76	1	908	1461
15: 8: 6	15	2904	0	76	0	908	1464
15: 8:21	15	2907	3	76	0	908	1464
15: 8:36	15	2909	2	76	0	908	1464
15: 8:51	15	2909	0	75	-1	908	1467
15: 9: 6	15	2909	0	75	0	908	1467
15: 9:21	15	2909	0	77	2	908	1464
15: 9:36	15	2909	0	77	0	908	1467
15: 9:51	15	2912	3	77	0	908	1467
15:10: 6	15	2912	0	76	-1	908	1470
15:10:21	15	2912	0	77	1	908	1470
15:10:36	15	2912	0	77	0	908	1470
15:10:51	15	2914	2	76	-1	896	1473
15:11: 6	15	2914	0	78	2	884	1473
15:11:21	15	2914	0	75	-3	881	1473
15:11:36	15	2916	2	76	1	887	1479
15:11:51	15	2916	0	78	2	881	1476
15:12: 6	15	2919	3	76	-2	878	1479
15:12:21	15	2921	2	76	0	884	1479
15:12:36	15	2921	0	77	1	908	1479
15:12:51	15	2919	-2	78	1	908	1479
15:13: 6	15	2921	2	77	-1	908	1482
15:13:21	15	2921	0	77	0	908	1482
15:13:36	15	2921	0	75	-2	899	1485
15:13:51	15	2921	0	77	2	890	1485
15:14: 6	15	2924	3	76	-1	884	1488
15:14:21	15	2924	0	77	1	887	1485
15:14:36	15	2926	2	77	0	902	1488
15:14:51	15	2926	0	77	0	878	1491
15:15: 6	15	2926	0	76	-1	878	1491
15:15:21	15	2929	3	77	1	966	1502
15:15:36	15	2931	2	76	-1	1083	1505
15:15:51	15	2931	0	76	0	1066	1505
15:16: 6	15	2934	3	76	0	1083	1508
15:16:21	15	2934	0	77	1	1083	1511
15:16:36	15	2936	2	77	0	1081	1511
15:16:51	15	2936	0	77	0	1063	1514
15:17: 6	15	2936	0	76	-1	1057	1514
15:17:21	15	2938	2	77	1	1057	1517
15:17:36	15	2941	3	77	0	1060	1517
15:17:51	15	2941	0	75	-2	1054	1520
15:18: 6	15	2943	2	77	2	1054	1523
15:18:21	15	2941	-2	75	-2	1054	1523
15:18:36	15	2943	2	76	1	1054	1523
15:18:51	15	2943	0	76	0	1054	1526
15:19: 6	15	2946	3	75	-1	1054	1526
15:19:21	15	2946	0	77	2	1054	1526
15:19:36	15	2948	2	77	0	1054	1526
15:19:51	15	2948	0	76	-1	1054	1526
15:20: 6	15	2948	0	78	2	1054	1529
15:20:21	15	2951	3	76	-2	1054	1529
15:20:36	15	2948	-3	75	-1	1054	1529
15:20:51	15	2951	3	77	2	1054	1532
15:21: 6	15	2951	0	76	-1	1054	1532
15:21:21	15	2951	0	76	0	1054	1532
15:21:36	15	2951	0	76	0	1054	1535

Holmes Wireline Service, Inc.  
Well Test Data

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Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
15:21:51	15	2953	2	76	0	1054	1532
15:22: 6	15	2953	0	76	0	1054	1535
15:22:21	15	2956	3	77	1	1054	1535
15:22:36	15	2956	0	76	-1	1054	1541
15:22:51	15	2956	0	77	1	1054	1538
15:23: 6	15	2956	0	76	-1	1054	1538
15:23:21	15	2958	2	75	-1	1054	1538
15:23:36	15	2958	0	76	1	1054	1541
15:23:51	15	2960	2	77	1	1054	1538
15:24: 6	15	2960	0	77	0	1054	1541
15:24:21	15	2960	0	78	1	1054	1541
15:24:36	15	2960	0	76	-2	1054	1543
15:24:51	15	2963	3	76	0	1054	1543
15:25: 6	15	2963	0	76	0	1054	1546
15:25:21	15	2965	2	77	1	1054	1546
15:25:36	15	2965	0	75	-2	1054	1546
15:25:51	15	2968	3	77	2	1054	1549
15:26: 6	15	2965	-3	77	0	1051	1549
15:26:21	15	2968	3	76	-1	1054	1549
15:26:36	15	2970	2	75	-1	1054	1552
15:26:51	15	2968	-2	77	2	1045	1552
15:27: 6	15	2970	2	76	-1	1042	1555
15:27:21	15	2970	0	76	0	1034	1552
15:27:36	15	2970	0	77	1	1042	1552
15:27:51	15	2970	0	76	-1	1054	1558
15:28: 6	15	2970	0	77	1	1054	1558
15:28:21	15	2973	3	77	0	1048	1558
15:28:36	15	2975	2	78	1	1054	1561
15:28:51	15	2975	0	77	-1	1054	1561
15:29: 6	15	2978	3	77	0	1054	1564
15:29:21	15	2975	-3	78	1	1054	1561
15:29:36	15	2980	5	75	-3	1054	1564
15:29:51	15	2978	-2	75	0	1054	1564
15:30: 6	15	2980	2	77	2	1054	1564
15:30:21	15	2982	2	77	0	1054	1564
15:30:36	15	2982	0	78	1	1054	1567
15:30:51	15	2982	0	76	-2	1054	1570
15:31: 6	15	2982	0	78	2	1054	1570
15:31:21	15	2982	0	75	-3	1054	1567
15:31:36	15	2982	0	77	2	1054	1570
15:31:51	15	2987	5	77	0	1054	1570
15:32: 6	15	2985	-2	77	0	1054	1570
15:32:21	15	2987	2	76	-1	1054	1573
15:32:36	15	2987	0	76	0	1054	1573
15:32:51	15	2987	0	76	0	1054	1576
15:33: 6	15	2990	3	78	2	1051	1576
15:33:21	15	2990	0	78	0	1042	1576
15:33:36	15	2990	0	76	-2	1037	1576
15:33:51	15	2992	2	77	1	1034	1579
15:34: 6	15	2992	0	76	-1	1040	1579
15:34:21	15	2992	0	77	1	1054	1579
15:34:36	15	2992	0	76	-1	1054	1576
15:34:51	15	2995	3	77	1	1054	1582
15:35: 6	15	2995	0	77	0	1054	1582
15:35:21	15	2995	0	77	0	1054	1584
15:35:36	15	2997	2	76	-1	1054	1584

## Well Test Data

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
15:35:51	15	2995	-2	76	0	1054	1584
15:36: 6	15	2995	0	75	-1	1054	1584
15:36:21	15	2997	2	76	1	1054	1587
15:36:36	15	2997	0	77	1	1054	1587
15:36:51	15	3000	3	77	0	1054	1587
15:37: 6	15	3000	0	78	1	1054	1587
15:37:21	15	3000	0	77	-1	1045	1590
15:37:36	15	3002	2	77	0	1040	1587
16: 9:13	1897	3012	10	76	-1	1025	1587
16: 9:27	14	3014	2	77	1	1025	1596
16: 9:42	15	3014	0	76	-1	1025	1593
16: 9:57	15	3014	0	77	1	1025	1596
16:10:12	15	3017	3	76	-1	1054	1596
16:10:27	15	3019	2	75	-1	1054	1596
16:10:42	15	3019	0	75	0	1054	1599
16:10:57	15	3019	0	77	2	1054	1602
16:11:12	15	3021	2	77	0	1054	1599
16:11:27	15	3019	-2	77	0	1054	1599
16:11:42	15	3021	2	77	0	1054	1602
16:11:57	15	3021	0	76	-1	1054	1599
16:12:12	15	3024	3	77	1	1054	1599
16:12:27	15	3024	0	77	0	1054	1599
16:12:42	15	3024	0	76	-1	1054	1599
16:12:57	15	3024	0	76	0	1054	1602
16:13:12	15	3024	0	77	1	1054	1602
16:13:27	15	3026	2	76	-1	1054	1605
16:13:42	15	3026	0	76	0	1054	1602
16:13:57	15	3026	0	78	2	1054	1605
16:14:12	15	3026	0	78	0	1054	1605
16:14:27	15	3029	3	77	-1	1054	1605
16:14:42	15	3029	0	77	0	1054	1608
16:14:57	15	3029	0	76	-1	1040	1608
16:15:12	15	3029	0	77	1	1045	1608
16:15:27	15	3029	0	76	-1	1028	1608
16:15:42	15	3031	2	78	2	1045	1608
16:15:57	15	3034	3	76	-2	1230	1623
16:16:12	15	3031	-3	77	1	1230	1625
16:16:27	15	3036	5	77	0	1230	1625
16:16:42	15	3034	-2	76	-1	1230	1625
16:16:57	15	3036	2	78	2	1230	1625
16:17:12	15	3039	3	77	-1	1230	1628
16:17:27	15	3039	0	76	-1	1230	1628
16:17:42	15	3039	0	76	0	1230	1631
16:17:57	15	3041	2	75	-1	1230	1631
16:18:12	15	3041	0	77	2	1230	1631
16:18:27	15	3039	-2	77	0	1204	1631
16:18:42	15	3043	4	76	-1	1201	1634
16:18:57	15	3043	0	77	1	1230	1634
16:19:12	15	3043	0	77	0	1230	1637
16:19:27	15	3046	3	77	0	1230	1637
16:19:42	15	3046	0	78	1	1209	1634
16:19:57	15	3046	0	78	0	1207	1634
16:20:12	15	3046	0	78	0	1201	1637
16:20:27	15	3046	0	76	-2	1201	1637
16:20:42	15	3048	2	77	1	1201	1640
16:20:57	15	3048	0	77	0	1201	1640

## Well Test Data

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
16:21:12	15	3046	-2	77	0	1201	1643
16:21:27	15	3048	2	78	1	1201	1643
16:21:42	15	3048	0	76	-2	1201	1643
16:21:57	15	3051	3	77	1	1201	1643
16:22:12	15	3048	-3	78	1	1201	1643
16:22:27	15	3053	5	77	-1	1201	1646
16:22:42	15	3053	0	77	0	1201	1646
16:22:57	15	3053	0	76	-1	1201	1646
16:23:12	15	3053	0	76	0	1201	1643
16:23:27	15	3053	0	77	1	1201	1643
16:23:42	15	3056	3	77	0	1201	1643
16:23:57	15	3053	-3	78	1	1201	1643
16:24:12	15	3053	0	77	-1	1201	1643
16:24:27	15	3056	3	76	-1	1201	1646
16:24:42	15	3058	2	77	1	1201	1646
16:24:57	15	3058	0	75	-2	1201	1646
16:25:12	15	3058	0	77	2	1171	1652
16:25:27	15	3058	0	77	0	1171	1652
16:25:42	15	3058	0	77	0	1171	1652
16:25:57	15	3061	3	78	1	1171	1652
16:26:12	15	3061	0	78	0	1201	1655
16:26:27	15	3061	0	77	-1	1201	1655
16:26:42	15	3063	2	78	1	1192	1652
16:26:57	15	3063	0	76	-2	1201	1658
16:27:12	15	3065	2	76	0	1201	1655
16:27:27	15	3063	-2	76	0	1201	1655
16:27:42	15	3065	2	77	1	1180	1658
16:27:57	15	3065	0	76	-1	1174	1658
16:28:12	15	3065	0	78	2	1174	1658
16:28:27	15	3068	3	78	0	1174	1661
16:28:42	15	3065	-3	76	-2	1201	1658
16:28:57	15	3068	3	77	1	1201	1661
16:29:12	15	3068	0	76	-1	1201	1661
16:29:27	15	3070	2	78	2	1201	1661
16:29:42	15	3070	0	76	-2	1201	1661
16:29:57	15	3070	0	77	1	1201	1661
16:30:12	15	3073	3	78	1	1201	1661
16:30:27	15	3070	-3	77	-1	1201	1664
16:30:42	15	3073	3	77	0	1201	1664
16:30:57	15	3075	2	76	-1	1201	1664
16:31:12	15	3073	-2	76	0	1201	1664
16:31:27	15	3073	0	77	1	1201	1664
16:31:42	15	3075	2	76	-1	1201	1664
16:31:57	15	3078	3	78	2	1201	1666
16:32:12	15	3078	0	76	-2	1201	1664
16:32:27	15	3078	0	76	0	1201	1666
16:32:42	15	3078	0	77	1	1201	1666
16:32:57	15	3078	0	76	-1	1201	1666
16:33:12	15	3078	0	78	2	1201	1666
16:33:27	15	3080	2	76	-2	1201	1669
16:33:42	15	3078	-2	78	2	1201	1669
16:33:57	15	3080	2	78	0	1201	1669
16:34:12	15	3080	0	78	0	1201	1672
16:34:27	15	3080	0	78	0	1195	1672
16:34:42	15	3083	3	77	-1	1171	1672
16:34:57	15	3085	2	77	0	1171	1672

## Well Test Data

Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
16:35:12	15	3085	0	77	0	1201	1675
16:35:27	15	3085	0	78	1	1201	1672
16:35:42	15	3085	0	78	0	1201	1675
16:35:57	15	3085	0	78	0	1201	1675
16:36:12	15	3085	0	76	-2	1201	1675
16:36:27	15	3087	2	76	0	1201	1675
16:36:42	15	3087	0	77	1	1201	1675
16:36:57	15	3087	0	77	0	1201	1678
16:37:12	15	3087	0	78	1	1201	1675
16:37:27	15	3087	0	76	-2	1201	1678
16:37:42	15	3087	0	76	0	1201	1678
16:37:57	15	3090	3	77	1	1201	1678
16:38:12	15	3087	-3	78	1	1201	1678
16:38:27	15	3090	3	79	1	1195	1681
16:38:42	15	3090	0	78	-1	1201	1678
16:38:57	15	3090	0	79	1	1198	1681
16:39:12	15	3092	2	77	-2	1201	1681
16:39:27	15	3092	0	77	0	1201	1681
16:39:42	15	3095	3	77	0	1180	1684
16:39:57	15	3092	-3	78	1	1180	1681
16:40:12	15	3092	0	77	-1	1201	1687
16:40:27	15	3095	3	77	0	1186	1687
16:40:42	15	3095	0	77	0	1171	1684
16:40:57	15	3097	2	77	0	1183	1684
16:41:12	15	3095	-2	78	1	1171	1687
16:41:27	15	3097	2	77	-1	1171	1690
16:41:42	15	3097	0	78	1	1171	1687
16:41:57	15	3097	0	76	-2	1171	1690
16:42:12	15	3097	0	76	0	1171	1690
16:42:27	15	3100	3	76	0	1171	1690
16:42:42	15	3097	-3	76	0	1201	1693
16:42:57	15	3100	3	78	2	1201	1693
16:43:12	15	3097	-3	78	0	1201	1693
16:43:27	15	3100	3	77	-1	1201	1696
16:43:42	15	3100	0	77	0	1201	1696
16:43:57	15	3100	0	78	1	1201	1696
16:44:12	15	3100	0	76	-2	1201	1696
16:44:27	15	3102	2	77	1	1201	1699
16:44:42	15	3105	3	77	0	1201	1696
16:44:57	15	3102	-3	77	0	1201	1696
16:45:12	15	3102	0	77	0	1201	1696
16:45:27	15	3105	3	79	2	1201	1702
16:45:42	15	3105	0	78	-1	1376	1713
16:45:57	15	3107	2	77	-1	1376	1713
16:46:12	15	3107	0	78	1	1376	1716
16:46:27	15	3109	2	77	-1	1376	1716
16:46:42	15	3109	0	77	0	1376	1719
16:46:57	15	3109	0	79	2	1376	1719
16:47:12	15	3109	0	78	-1	1362	1719
16:47:27	15	3112	3	76	-2	1350	1719
16:47:42	15	3112	0	78	2	1347	1722
16:47:57	15	3112	0	77	-1	1347	1722
16:48:12	15	3112	0	77	0	1347	1719
16:48:27	15	3112	0	76	-1	1347	1725
16:48:42	15	3117	5	77	1	1347	1722
16:48:57	15	3114	-3	79	2	1347	1722

Holmes Wireline Service, Inc.  
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Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
16:49:12	15	3114	0	77	-2	1347	1722
16:49:27	15	3117	3	78	1	1347	1722
16:49:42	15	3117	0	77	-1	1347	1725
16:49:57	15	3117	0	78	1	1347	1725
16:50:12	15	3117	0	78	0	1347	1725
16:50:27	15	3117	0	79	1	1347	1728
16:50:42	15	3119	2	77	-2	1347	1725
16:50:57	15	3122	3	77	0	1347	1725
16:51:12	15	3122	0	78	1	1347	1728
16:51:27	15	3119	-3	78	0	1347	1728
16:51:42	15	3122	3	77	-1	1347	1728
16:51:57	15	3122	0	77	0	1347	1728
16:52:12	15	3124	2	78	1	1347	1728
16:52:27	15	3126	2	79	1	1347	1728
16:52:42	15	3124	-2	78	-1	1347	1728
16:52:57	15	3126	2	79	1	1347	1728
16:53:12	15	3126	0	77	-2	1347	1728
16:53:27	15	3129	3	78	1	1347	1728
16:53:42	15	3129	0	76	-2	1341	1731
16:53:57	15	3126	-3	79	3	1321	1728
16:54:12	15	3126	0	79	0	1321	1731
16:54:27	15	3129	3	77	-2	1321	1731
16:54:42	15	3129	0	77	0	1318	1731
16:54:57	15	3131	2	77	0	1321	1731
16:55:12	15	3131	0	78	1	1318	1734
16:55:27	15	3131	0	77	-1	1347	1734
16:55:42	15	3131	0	76	-1	1347	1734
16:55:57	15	3131	0	76	0	1347	1734
16:56:12	15	3131	0	77	1	1347	1734
16:56:27	15	3134	3	78	1	1347	1737
16:56:42	15	3131	-3	78	0	1324	1734
16:56:57	15	3134	3	78	0	1318	1740
16:57:12	15	3134	0	78	0	1318	1737
16:57:27	15	3134	0	79	1	1321	1737
16:57:42	15	3136	2	77	-2	1318	1740
16:57:57	15	3136	0	78	1	1347	1737
16:58:12	15	3136	0	76	-2	1347	1740
16:58:27	15	3136	0	77	1	1347	1740
16:58:42	15	3139	3	78	1	1347	1740
16:58:57	15	3136	-3	77	-1	1341	1740
16:59:12	15	3139	3	78	1	1318	1743
16:59:27	15	3139	0	77	-1	1374	1746
16:59:42	15	3139	0	76	-1	1371	1746
16:59:57	15	3141	2	77	1	1368	1749
17: 0:12	15	3141	0	78	1	1347	1749
17: 0:27	15	3141	0	77	-1	1347	1746
17: 0:42	15	3141	0	77	0	1347	1749
17: 0:57	15	3141	0	78	1	1347	1749
17: 1:12	15	3141	0	78	0	1347	1746
17: 1:27	15	3144	3	77	-1	1347	1749
17: 1:42	15	3144	0	78	1	1347	1749
17: 1:57	15	3144	0	77	-1	1347	1749
17: 2:12	15	3144	0	78	1	1347	1749
17: 2:27	15	3146	2	78	0	1347	1749
17: 2:42	15	3146	0	77	-1	1347	1749
17: 2:57	15	3146	0	77	0	1347	1749

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Time of Day	Delta Time (sec.)	Pressure (PSIG)	Delta Pressure (PSIG)	Temperature (deg. F)	Delta Temp. (deg)	Flow Rate (BPD)	Surf Pres (PSIG)
17: 3:12	15	3146	0	77	0	1347	1751
17: 3:27	15	3146	0	78	1	1347	1751
17: 3:42	15	3144	-2	77	-1	1347	1749