


8/1/76 5992 Drlg shale. Att sur  Drld to 5944', POH, to tbl plg out, chg'd BH assy. On t. 00593093 & ream 5865-5944'. Started drlg 9 p.m. w/ 15M#, inc to 25M#, @ 11:30 p.m. 7/31. Mud: 8.6#, vis 72, FL 6.8, 2/32 Fc, Cl 170M ppm, Pv 19, yld 39, Gels 25/29, water 20%, solids 10%, oil 70%. B #8, HTC, X1G, 5844-5944, 100' in 21-1/4 hr. B#9, Smith, F-3, 5944' & drlg, 48' in 9 hr.

8/2/76 6122 Drlg shale. Made 2 attempts to survey @ 6043', instrument fell slowly, est 50 min to get to btm. 54 RPM, 25M#. Mud: 8.6#, vis 91, FL 5.2, 2/32 FC, 145M ppm Cl, Pv 22, Yld 60, Gels 29/32, water 22%, solids 12%, oil 66%, ORW 75:25. B#9, Smith, F-3, in @ 5944' & drlg, 178' in 31 hrs.

8/3/76 6325 Circ'g f/survey. Att survey @ 6203', no picture. 25-1/2° S44W @ 6234'. 52 RPM, 25M#. Mud 8.4#, vis 51, FL 5.8, 2/32 FC, Cl 150M ppm, Pv 20, yld 60, Gels 30/32 wtr 24%, solids 10%, oil 66%, ORW 73:27. B#9, Smith, F-3, in @ 5944' & drlg, 381' in 53 hrs. \$ 538,662

8/4/76 6500 Drlg sh. 28° S44W @ 6392'. Drld to 6475'. Circ hole. Ran survey @ 6392', 2-1/2 in 150', reduced bit wt to 20M#. 52 RPM, 20M#. Mud 8.7#, vis 59, FL 6.0, 2/32 FC, Cl 155M ppm, Pv 11, Yld 23, Gels 19/21, wtr 18%, solids 10%, oil 72%, ORW 80/20. B#9, Smith, F-3, in @ 5944', & drlg, 556' in 74-1/2 hrs. \$ 548,884

8/5/76 6638 Circ'g f/survey. 29-1/2° S45W @ 6548': Sh & lime. ST Ft Hays 6572'. 52 RPM, 20M#. Mud 8.6#, 5.1 vis, FL 6.0, 2/32 FC, Cl 200M ppm, Pv 14, Yld 26, Gels 18/21 wtr 16%, solids 11%, oil 73%, ORW 82:18. B#9, Smith, F-3, in @ 5944' & drlg, 694' in 97 hrs. \$ 555,896

8/6/76 6764 Codell, trip out f/DST #1. ST Codell 6690'. 52 RPM, 20M#. Mud 8.5#, vis 50, FL 6.2, 2/32 FC, Cl 210M ppm, Pv 12, Yld 23, Gels 19/21, wtr 16%, solids 11%, oil 73%, ORW 82:18. B#9, Smith, F-3, in @ 5944', 820' in 115-3/4 hrs. \$562,259

8/7/76 6781 Drlg. 30-1/2° S47W @ 6714'. Strapped out, corr 6764-6767'. DST #1, 6695-6767', Codell, 58 min pre-flw, open w/wk blow (air hose on clutch broke, 58 min before rep'd); 90 min ISIP; 60 min final flw; 105 min FSIP. Rec'd 330' DM. IH 2981#, 58 min IF 39-65#, 90 min ISIP 118#, 60 min FF 65-92#, 105 min FSIP 131# & vy slowly building. FH 2955#. Sampler: 50#, 2200cc DM, no shows. BH 170+° (170° instrument). 54 RPM, 20M#. Mud 8.5#, vis 51, FL 6.2, 2/32 FC, 210M ppm Cl, Pv 12, Yld 23, Gels 19/21, wtr 15%, solids 11%, oil 74%, ORW 83:17. B#10, Smith, F-3, in @ 6767' & drlg, 14' in 2 hrs. \$ 570,828

8/8/76 6960 Drlg Carlile sh. 52 RPM, 20M#. Mud 8.5#, vis 51, FL 6.2, 2/32 FC, Cl 295M ppm, Pv 15, Yld 25, Gels 19/23, wtr 15%, solids 8.5%, oil 75%, ORW 83:17. B#10, Smith, F-2, in @ 6767' & drlg, 194' in 25-1/2 hrs. \$ 577,301

8/9/76 7171 Drlg sh & ls. 31-1/2° S47W @ 6896'. 52 RPM, 20M#. Mud 8.5#, vis 54, FL 5.1, 3/32 FC, Cl 400M ppm, Pv 14, yld 25, gels 19/23, wtr 16%, solids 9.4%, oil 72%, ORW 82:18. B#10, Smith, F-3, in @ 6767' & drlg, 404' in 48 hrs. \$ 589,527

8/10/76 7362 Drlg. 33-1/2° S47W @ 7120'. 54 RPM, 20M#. Mud 8.5+#, vis 51, FL 6.4, 2/32 FC, Cl 385M ppm, Pv 14, Yld 29, Gels 20/24, wtr 15%, solids 10%, oil 73%, ORW 83:17. B#10, Smith, F-3, in @ 6767 & drlg, 595' in 70 hrs. \$ 596,474

8/11/76 7580 Drlg. 35° S48W @ 7420'. 54 RPM, 20M#. Mud 8.6#, vis 55, FL 6.6, 2/32 FC, Cl 390M ppm, Pv 14, Yld 22, Gels 16/21, wtr 14%, solids 11.8%, oil 72%, ORW 84/16. B#10, Smith, F-3, in @ 6767 & drlg, 813' in 92-1/2 hrs. \$ 604,396

8/12/76 7623 Cor'g 36° S47W @ 7569, 54 RPM 20-25M#. Mud 8.5#, vis 64, Fl 5.2, 2/32 FC, Cl 365M ppm, Pv 17, Yld 41, Gels 24/35, wtr 16%, solids 12%, oil 72%, ORW 86/14. B#10, Smith, F-3, in 6767-7619, 852' in 101 hrs. B#11 Chris, MC-23, in @ 7619 & drlg, 4' in 1-1/4 hrs. Drld f/7580-7619' 5'/hr. Trip out of hole f/Core #1. Strip out of hole, pick up core bbl & bit. Trip in hole - cored f/7619-7623, 3'/hr. Taking 60' of core survey 1°-150'. Rmd 4' to btm. \$ 617,798

8/13/76 7653 Drlg. 54 RPM, 20M#. Mud 8.5#, vis 82, Fl 6.5, 2/32 FC, Cl 365M ppm, Pv 18, Yld 48, Gels 32/32, wtr 14%, solids 8.1%, oil 76%, ORW 84/16. B#11, Chris, MC-23, in 7619-7634, 15' in 5-1/4 hrs. B#12, Smith, F-4, in @ 7634' & drld 19' in 4 hrs. Cored to 7634' & pump press increased indicating plugging. POH Core bbl. plugged w/pieces of shaker screen & small pieces of rubber. Core f/7619-34; 15' rec 11.2, sd st, gray fine to med grain, quartzitic, no pros. no perm.

8/13/76 Contd Ran bit, resumed drlg.

\$ 627,254

8/14/76	7738	PU core bbl. Drlg 10-17 min/ft, brk 7733-38' to 3-7 min/ft, sd, tan, fg, fri. 52 RPM, 20M#. Mud 8.6#, vis 68, 5.7 FL, 2/32 FC, Cl 365M ppm, Pv 17, Yld 43, Gels 28/34, wtr 12%, solids 10.5%, oil 76%, OWR 86:14. B#12, Smith, F-4, 7634-7738, 104' in 18-3/4 hrs. \$ 635,909
8/15/76	7772	Trip in f/DST #2, Dakota, 7705-72'. C#2, 7738-72', Dakota, cut 34', rec'd 32.2' 18' SS, gray-tan, fg, 6-12% por; 14.2' SS, f-mg, conglomeritic w/triplite quartzitic w/chert & coarse sd, 4-8% por, poorly sorted. 7758-79', 70° dips in core. 56 RPM, 23M#. Mud 8.7#, vis 64, Fl 5.4, 2/32 FC, Cl 360M ppm, Pv 16, Yld 34, Gels 22/26, 14% wtr, 10.1% solids, 74% oil, OWR 84:16. B#13, Chris, MC-23, cored 7738-72', 34' in 5-3/4 hrs. \$ 644,294
8/16/76	7813	Drlg. No surveys. DST #2, 7705-7772, Dakota, 3/4" BHC, 1/4" SC, no WC. Opn 5 min w/sk blow in 2" wtr, bled dn in 5 min. 30 min ISIP. 45 min 2nd flw, opn w/wk blw, inc to 4" in bucket in 5 min, opn to check press on test line & dead in 2 min. 45 min 2nd SI. 45 min FF, wk blw in 1/2" wtr, dead in 5min. 90 min FSI. Rec'd 270' vy sli GCDM. 5 min IF 64-64#, 30 min ISIP 76-79#, 15 min 2nd F 79-79#, 45 min 2nd SI 79-102#, 45 min FF 102-102#, 90 min FSIP 102-126#. IF 3020#, FH3300#. Sampler: 70#, .1 CFG, 2200 cc DM, BHT 195°. 52 RPM, 20M#. Mud 8.6#, 69 vis, 5.7 FL, 2/32 FC, 376M ppm Cl, Pv 17, Yld 32, Gels 33/28, 12% wtr, 9.6% solids, 78% oil, OWR 86:14. B#14, Smith, F-4, in @ 7772' & drlg, 41' in 7 hrs. \$ 667,979
8/17/76	7980	Drlg Dakota. 52 RPM, 20M#. Mud 8.7#, 62 vis, 7.2 FL, 2/32 FC, 420M ppm Cl, Pv 13, Yld 28, Gels 18/23, 12% wtr, 10% solids, 76% oil, OWR 86:14. B#14, Smith, F-4, in @ 7772' & drlg, 208' in 31 hrs. \$ 662,949
8/18/76	8014	Trip in f/DST #3, 7935-8014, Dakota. Drld to 7983', ran survey, no good. Drld to 8000', ran survey, no good, Strapped out, corr to 8014'. 52 RPM, 20M#. Mud 8.7#, vis 62, FL 5.4, 2/32 FC, Cl 415M ppm, Pv 17, Yld 36, Gels 23/27, wtr 12%, solids 10%, oil 76%, OWR 86:14. B#14, Smith, F-4, 7772-8014', 242' in 33-3/4 hrs. \$ 672,535
8/19/76	8066	Drlg Dakota. DST #3, 7935-8014', Dakota, 5/8 BHC, 3/4 SC. 5 min pre-flw, bubble f/30 sec, vy vy wk blw & died; 30 min ISIP; 45 min 2nd flw, no bubble; 45 min 2nd SI; 45 min FF, vy vy faint blw f/5 min & died; 90 min FSIP. Rec'd 120' DM. IH 3451#, 5 min pre-flw 92#, 30 min ISIP 1582#; 45 min 2nd flw 120#; 45 min 2nd SI 955#; 45 min FF 111#; 90 min FSIP 1174#; FH 3470#; BHT 190°. Hole stood full 52 RPM, 20M#. Mud 8.7#, 64 vis, FL 5.4, 2/32 FC, 415M ppm Cl, Pv 17, Yld 36, Gels 22/27, wtr 12%, solids 10%, oil 76%, OWR 86:14. B#15, HTC, J-44, in @ 8014' & drlg, 52' in 7-1/2 hrs. \$ 686,050
8/20/76	8238	Drlg Dakota. 52 RPM, 20M#. Mud 8.7#, vis 69, FL 6.0, 2/32 FC, Cl 450M ppm, Pv 19, Yld 40, Gels 27/32, wtr 12%, solids 9.5%, oil 76%. B#15, HTC, J-44, in @ 8014' & drlg, 224' in 31-1/2 hrs. \$ 691,175
8/21/76	8309	Drlg Morrison. 52 RPM, 20M#. Mud 8.6#, vis 64, FL 5.4, 2/32 FC, Cl 450M ppm, Pv 17, Yld 36, Gels 25/27 solids 11.4%, oil 74%, wtr 12%. B#15, HTC, J-44, in @ 8014-8270', 256' in 39-1/2 hrs. B#16, Smith, F-3, in @ 8270' & drlg, 39' in 5-1/2 hrs. Est Morrison top 8250; OWR 86:14 \$ 709,100
8/22/76	8453	Drlg Morrison. 52 RPM, 20M#. Mud 8.6#, vis 63, FL 5.4, 2/32 FC, Cl 450M ppm, Pv 17, Yld 36, Gels 25/27, solids 11.4%, wtr 12%, oil 74%, OWR 86:14. B#16, Smith, F-3, in 8270' & drlg, 183' in 27-1/2 hrs. \$ 714,425
8/22/76	cont'd	
8/23/76	8588	Drlg Morrison. 52 RPM, 20M#. Mud 8.6#, vis 60, FL 5.2, 2/32 FC, Cl 450M ppm, Pv 15, Yld 35, Gels 21/25, wtr 10%, solids 13.6%, oil 74%, OWR 84:14. B#16, Smith F-3, in @ 8270' & drlg, 318' in 51-1/2 hrs. \$ 723,948
8/24/76	8676	Drlg Morrison. 52 RPM, 20M#. Mud 8.7#, vis 60, FL 4.8, 2/32 FC, Cl 450M ppm, Pv 17, Yld 33, Gels 20/23, wtr 10%, solids 12%, oil 76%, OWR 89:11, B#16, Smith F-3, in 8270' & drlg, 408' in 73 hrs. \$ 732,456
8/25/76	8771	Drlg Morrison, sh. 52 RPM, 20M#. Mud 8.6#, vis 63, FL 4.8, 2/32 FC, Cl 450M ppm, Pv 15, Yld 31, Gels 19/21, wtr 11%, solids 12%, oil 78%, OWR 89:11. B#16, Smith F-3, in @ 8270' & drlg, 501' in 93-1/4 hrs. \$ 739,617
8/26/76	8824	Drlg Morrison, sh. 33° South, 46° West @ 8723'. Mud 8.6#, vis 65, FL 4.8, FC 2/32, Cl 450M ppm, Pv 18, Yld 34, Gels 20/23, wtr 14%, solids 12%, oil 84%, OWR 84:16. B#16, Smith F-3, in @ 8270-8813', made 543' in 101-1/4 hrs. B#17, Smith F-2, in @ 8813' & drlg, 11' in 1-1/2 hrs. \$ 751,108

8/27/76	9004	Drlg - Circ f/survey. Morrison-sh 35° South, 44 West @ 8914'. Mud 8.5#, vis 60, FL 4.8, FC 2/32, Cl 450M ppm, Pv 18, Yld 33, Gels 20/24, wtr 10%, oil 78%, solids 12%, OWR 89:11. B#17, Smith, F-2 in @ 8813' drlg, made 191' in 24-1/2 hrs. \$ 756,810
8/28/76	9190	Drlg. Morrison: Mud 8.6#, vis 67, FL 5.0, FC 2/32, Cl 450M ppm, Pv 16, vis 67, Gels 20/25, oil 78%, wtr 10%, solids 12%, OWR 89:11. B#17, Smith F-2, in @ 8813' drlg, made 377' in 47-1/4 hrs. \$ 762,135
8/29/76	9353	Drlg - Sd. Mud 8.5#, vis 55, FL 5, FC 2/32, Cl 450M ppm, Pv 16, Yld 38, Gels 17/21, wtr 10%, oil 78%, solids 12%, OWR 89:11. B#17, Smith, F-2, in @ 8813' drlg, made 540' in 68-3/4 hrs. \$ 767,460
8/30/76	9371	Trip in hole f/DST #4, 9300-9371', Entrada 9227', one open, wk blw, 1/2" in 5 gal bkt, open f/20 min, SI f/75 min, 2 open f/75 min, vy vy wk blw, SI 90 min 34° S 47 W @ 9287'. Mud 8.6#, vis 61, FL 4.6, FC 2/32, Cl 450M ppm, Pv 18, Yld 30, Gels 17/23, wtr 10%, oil 78%, solids 12%, OWR 89:11. B#17, Smith, F-2, in @ 8813-9171', made 558' in 72-1/4 hrs. \$ 776,046
8/31/76	9412	Drlg Entrada, SS, hd ti w/chert particles. DST #4, 9300-9371', Entrada, 3/4" BHC, 1/4" SC, no WC. 20 min IF, wk 1/2" blw in 5 gal bkt; 75 min ISIP; 75 min FF, wk 1/2" blw dec to 1/8"; 90 min FSIP. Rec'd 200' WCDM & 20' wtr. Sampler: 0#, 2000 cc WCDM, no gas, BHT 197°. IH 3843#, 20 min IF 81-100#, 75 min ISIP 2595#, 75 min FF 103-122#, 90 min FSIP 1797#, FH 3819#. Mud 8.5#, 64 vis, 4.8 FL, 2/32 FC, 450M ppm, Pv 18, Yld 30, Gels 18/25, 10% wtr, 10% solids, 80% oil, OWR 90:10. B#18, HTC, J-44, in @ 9371' & drlg, 41' in 9-1/4 hrs. \$ 787,081
9/01/76	9529	Drlg Sangre de Cristo, ST @ 9497'. 52 RPM, 30M#. Mud 8.6#, 64 vis, FL 5, 2/32 FC, Cl 450M ppm, Pv 18, Yld 30, Gels 18/25, wtr 10%, solids 10%, oil 80%, OWR 90:10. B#18, HTC, J-44, in @ 9371' & drlg, 158' in 33-1/4 hrs. \$ 791,410

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