

7/02/76	60	SPUDDER 10:00 p hole opener. Re conductor pipe, set Flocele/sx. PD @ 0.30 7/1/76. Gd ret while cmtg. Left 20' cmt in csg. \$41,480	1/2" hole yest morn. Trpg out to PO to 26". Ran 59.63' 20" .375 wall con- ductor pipe, set Type "G" reg, w/3% CaCl2, 1/4#
7/03/76	320	Drilg. 3/4 @ 130', 1/2 @ 228', 0 @ 320'. 70 RPM, 15M#. Gel chem. Drilg 17-1/2" hole, Smith bit, SDG, RR #1. WOC & nip'd up. Started drilg @ 8:00 p.m. 7/2/76. \$47,940	
7/04/76	440	WOC. 1/4 @ 440'. 70 RPM, 12-15M#. B#1, Smith, SDG, total 440' in 18-1/4 hrs. Drld 17-1/2" hole to 440'. Ran 11 jts, 464', 13-3/8" OD 54.5# K-55, 8 rd, ST&C. R-3, new csg, set @ 440'KB w/400 sx Class "G" w/2% CaCl, 1/4# Flocele/sx. PD 1:00 a.m. 7/4/76. Gd ret while cmtg, cmt circ'd.	
7/05/76	440	Nipl'g up. WOC	
7/06/76	440	Drilg out cmt. Finished nipling up. Tstd blind rams, rep'd leaks, retstd blind rams to 1000# f/30 min, held OK. Ran in hole, tstd pipe rams to 1000# f/30 min & hydril to 600# f/30 min, held OK. Tag cmt at 370'. Drld 10' cmt. Displ hole w/oil base mud. Drld add'l 10' cmt, now drilg on rubber plug. Mud 7.9#, 45 vis, FL 10, 2/32 FC, Cl 190M ppm, Pv 9, Yld 6, Gels 4/6, solids 10%, wtr 10%, oil 80%. 36 RPM, 15M#. B#2, 12-1/4" Smith, DGJ, in hole. \$68,038	
7/07/76	560	Taking survey. Drld out cmt, drld to 472', trip & chg'd BH assy. Drld to 560', attempted survey, no picture, rerunning. Mud 7.5#, vis 41, FL 5.2, FC 2/32, Cl 220M ppm, Pv 9, Yld 7, Gels 5/8, solids 10%, wtr 10%, oil 80%, OWR 89:11. B#2, Smith, DGJ, in @ 440, 120' in 6-3/4 hrs. \$74,525+	
7/08/76	1156	Taking survey. 1/4° S78W @ 540; 1° S70W @ 713; 1-1/4° S70W @ 874. Mud 8.5#, vis 50, FL 6.6, 2/32 FC, Cl 285M ppm, Pv 15, Yld 13, Gels 13/15, solids 9.1%, wtr 10%, oil 80%, OWR 89:11. B#2, Smith, DGJ, in @ 440', 716' in 26-1/2 hrs. \$80,404+	
7/09/76	1742	Drilg sh. 1° N75W @ 1115'; 1/2° N75W @ 1387'. 65 RPM, 25-30M#. Mud 8.8#, 95 vis, FL 6.6, 2/32 FC, Cl 280M ppm, Pv 57, Yld 23, solids 9.1%, wtr 10%, oil 80%, OWR 89:11. B#2, Smith, DGJ, 440-1742', 1302' in 48-1/2 hrs. \$130,519	
7/10/76	2191	Drilg sh. 1° N80W @ 1760; 3/4° N75W @ 2032'. TVD 2031.8', .95" North & 24.79' W. 54 RPM, 25-30M#. Mud 8.5#, 70 vis, FL 6.8, 2/32 FC, Cl 225M ppm, Pv 27, Yld 26, solids 11.1%, wtr 16%, oil 72%. B#2, Smith, DGJ, 440-1760', 1320' in 50-1/2 hrs. B#3, Smith, 2JS, in @ 1760' & drilg, 431' in 15-1/2 hrs. \$142,357	
7/11/76	2790	Drilg sh. 1/2° S22E @ 2325'; 1/4° N5E @ 2710'. 54 RPM, 30M#. Mud 8.8#, 61 vis, 6.8 FL, 2/32 FC, Pv 15, Yld 22, 10.9% solids, 16% wtr, 72% oil, OWR 82:18. B#3, Smith 2JS, in @ 1760' & drilg, 1030' in 37-1/2 hrs. \$148,263	
7/12/76	3411	Drilg sh. 1/4° S25E @ 3138'. 54 RPM, 30M#. Mud 8.6#, 89 vis, FL 6.0, 2/32 FC, Cl 272M ppm, Pv 16, Yld 32, 10.9% solids, 16% wtr, 72% oil, OWR 82:18. B#3, Smith, 2JS, in @ 1760' & drilg, 1651' in 59-1/4 hrs. \$159,918	
7/13/76	3862	Drilg sh. 54 RPM, 20-30M#. 2-1/2° S36W @ 3514; 3° S20W @ 3608; 3-3/4° S23W @ 3760'. Mud 8.6#, 70 vis, FL 6.4, 2/32 FC, 280M ppm Cl, Pv 20, Yld 51, Gels 28/34, wtr 16%, solids 8.5#, oil 74%, OWR 82:18. B#3, Smith, 2JS, in @ 1760' & drilg, 2102' in 78-3/4 hrs. \$175,838	
7/14/76	4186	Drilg sd, sh & silt. ST Apache 3868'. 4-3/4° S10W @ 3890' 6-1/4° S27W @ 4130'. 54 RPM, 30M#. Mud 8.5#, vis 55, FL 6.8, 2/32 FC, Cl 285M ppm, Pv 15, Yld 20, Gels 16/19, wtr 14%, solids 8.6%, oil 76%, OWR 84:16. B#3, Smith, 2JS, in @ 1760' & drilg, 2426' in 99-1/2 hrs. \$186,690	
7/15/76	4572	Drilg sh & silt. 7-1/2° S45W @ 4390'. 54 RPM, 30M#. Mud 8.5#, 54 vis, FL 7.5, 2/32 FC, Cl 280M ppm, Pv 13, Yld 18, Gels 14/18, 7.9% solids, 12% wtr, 79% oil, OWR 87:13. B#3, Smith, 2JS, in @ 1760' & drilg, 2812' in 121-1/2 hrs. \$194,410	
7/16/76	4935'	Drilg sh. 9-1/2° S27W @ 4643, misrun. 54 RPM, 30M#. Mud 8.4#, 57 vis, 7.2 FL, 2/32 FC, 290M ppm Cl, Pv 13, Yld 19, Gels 14/18, wtr 12%, solids 8.9%, oil 78%, OWR 87:13. B#3, Smith, 2JS, in @ 1760' & drilg, 3175' in 141-3/4 hrs. \$221,400	
7/17/76	5281	Drilg sh. 11-1/2° S28W @ 4884'; 14° S43W @ 5146'. 54 RPM, 30M#. Mud 8.5#, vis 6' Fl 7.6, 2/32 FC, 290M ppm Cl, Pv 15, Yld 21, Gels 15/19, solids 6.9%, wtr 12%, oil 82%, OWR 87:13. B#3, Smith, 2JS, in @ 1760' & drilg, 3521' in 163-3/4 hrs. \$229,087	
7/18/76	5562	Drilg sh. 16-3/4° S43W @ 5396'. 54 RPM, 30M#. Mud 8.3#, vis 55, FL 6.8, 2/32 FC, 290 M ppm Cl, Pv 14, Yld 18, solids 6.6%, wtr 14%, oil 78%, OWR 85:15. B#3, Smith, 2JS, in @ 1760' & drilg, 3802' in 186-1/4 hrs. \$254,133	
7/19/76	5778	Drilg sh. 19° S41W @ 5640'. 54 RPM, 30M#. Mud 8.3#, vis 56, FL 7.2, 2/32 FC, 290M ppm Cl, Pv 13, Yld 17, Gels 14/18, solids 5.9%, wtr 12%, oil 81%, OWR 87:13. B#3, Smith, 2JS, in @ 1760' & drilg, 4018' in 207-3/4 hrs. \$264,697	
7/20/76	5844	Washing out sh @ 2133'. 21° S42W @ 5844'. Trip to chg bit, dress BH assy @ 5844', hit bridge @ 1887' going in. Mud 8.25#, vis 75, FL 6.8, 2/32 FC, Cl 280M ppm, Pv 15, Yld 22, Gels 15/18, solids 8.6%, wtr 16%, oil 74%, OWR 82:18. B#3, Smith, 2JS, 1760-5844, 4084' in 214 hrs. \$279,256	



7/21/76	5844	Washing & reaming @ 2544' (411') 18-1/2 hrs. Mud 8.7#, 75 vis, 6.0 FL, 2/32 FC. 270M ppm Cl, Pv 18, Yld 29, Gels 22/24, wtr 18%, solids 8.5%, oil 72%, OWR 80:20. 54-80 RPM, 0-10M#. B#4, Smith, 3JS, Wash & ream 276' in 10 hrs. B#5, Sec., S3S, wash & ream 381' in 16-1/2 hrs. \$ 287,356
7/22/76	5844	Washing, rmg, circ'g, bldg vol @ 3639', losing some mud, sh sloughing (coming in). 1095' last 24 hrs. Mud 8.8#, vis 58, FL 6.4, 2/32 FC, Cl 265M ppm, Pv 14, Yld 21, solids 8.7%, wtr 17%, oil 73%. B#5, Sec., S3S, in @ 2163', W & R 1476' in 40-1/2 hrs. \$ 298,987
7/23/76	5844	Washing, reaming & circ'g @ 4149', 510' last 24 hrs. 54-90 RPM, 0-10M#. Mud 8.8, 52 vis, FL 6.3, 2/32 FC, Cl 255M ppm, Pv 18, Yld 27, Gels 19/20, wtr 16%, solids 10.8%, oil 72%, OWR 82:18. B#5, Sec. S3S, W & R 2163-4149', 1986' in 58-1/2 hrs. \$ 308,827
7/23/76	5844	Washing & reaming back to bottom @ 4149'. Trip f/bit @ 5844'. Hit fill @ 1887' going in. Survey at 5844' is 21° S42W. Coordinates: 347' South, 281' West, TVD 5793'. AFE #337323.
7/24-25/76	5844	Washing & reaming @ 5050', 901' last 24 hrs. 54-90 RPM, 0-10M#. Mud: 8.8#, vis 68, FL 6.2, 2/32 FC, 265M ppm Cl, Pv 18, Yld 32, Gels 15/17, solids 10.9%, water 14%, oil 74%, OWR 84:16. B #5, Sec., S3S, W & R 2163-5050', 2887' in 75-1/2 hrs.
25 7/24-25/76	5844	Circ'g & cond'd hole @ 5844', 794'. 54-90 RPM, 0-10M#. Mud: 9.0#, vis 120, FL 5.6, FC 2/32, Cl 370M ppm, Pv 21, Yld 64, gels 10/21, solids 10%, water 12%, oil 78%. B #5, Sec. S3S, W & R 3681' in 93-1/4 hrs.
7/24-26/76	5844	Starting to wash out fill @ 5799' after trip in. Circ'd & cond'd hole. Made 15 stand short trip, had 90' fill, Circ'd & washed out to 5844', cond'd hole 4 hrs. POH, chg'd bit. Trip in, had 45' fill. 54-90 RPM, 0-10M#. Mud: 9#, 120 vis, 5.6 FL, 2/32 FC, 250M ppm Cl, Pv 64, yld 21, Gels 30/32, solids 10%, water 14%, oil 76%. B #6, GIH, Rerun of #4, Smith, 3JS.
7/27/76	5844	Logging, pig out w/ DM. Washed & reamed 5799-5844', cond'd hole 6 hrs. POH. RU & ran DIL and Comp. Integrated Sonic w/cal., Rng DN. WLTD 5844'. Tops: Apache 1358', Apache 3840' (yep, twice), Niobrara 5577'. Mud: 9#, vis 120, FL 5.6, 2/32 FC, 250M ppm Cl, Pv 21, Yld 64, Gels 30/32, solids 10%, water 14%, oil 76%.
7/28/76	5844	Laying dn BH assy. Finished logging. Trip in, circ & cond'd mud (cond'd mud considerably a/c rain in pit). Started out laying down. Mud: 8.8#, 145 vis, FL 6.0, 2/32 FC, Cl 200M ppm, Pv 21, Yld 61, Gels 31/36, water 20%, solids 10%, oil 70%, OWR 78:22.
7/29/76	5844	WOC. LD DP & DC. Ran 9-5/8" OD casing as follows: 55 jts 43# N-80 LT&C R-3 N 2283.57' (On btm) 45 jts 40# K-55 LT&C R-3 N 1859.30' 43 jts 40# Buttress R-3 N 1705.79' (On top) Shoe & collar 4.71' 43 jts 5853.37' set @ 5844' KB meas. Prec cmt w/ 20 B diesel w/Mor-flo & 20 BW w/ Mor-flo, cmt'd w/ 250 sx-HOWCO light & 200 sx Class G regular, gd returns thruout, worked pipe thruout job, plug down 10:30 p.m. 7/28/76. 6 cant'r every other jt on btm.
7/30/76	5844	Pick up DP. WOC to 8 am 7/29. Hung csg w/ 120M# on OCT hanger. Cut off csg, NU BOP. Tested blind rams 1200# f/30 min held O.K. Started in hole w/ bit & BH assy. Mud: 8.8#, vis 150, FL 6.0, 2/32 FC, Cl 200M ppm, Pv 21, Yld 60, water 20%, solids 10%, oil 70%. B #8, HTC, X1G, going in hole.
7/30/76	5844	Picking up DP to drill out. CO to 5844'. Ran logs. Cmt'd 9-5/8" casing @ 5844'. AFE #337323
7/31/76	5909	Drlg shale 69 RPM, 10-15M#. Mud: 8.6#, 63 vis, 7.6 FL, 2/32 FC, 210M ppm Cl, Pv 11, Yld 12, water 16%, solids 8%, oil 76%. B #8, HTC, X1G, 5844' & drlg, 65' in 15 hrs. Finished picking up DP, tag top cmt @ 5790'. Tested pipe rams @ 1200# f/ 30 min., held O.K.. Drld cmt & shoe. Started drlg w/ 10-15M#.
8/1/76	5992	Drlg shale. Att survey @ 5944', failed. Drld to 5944', POH, to tbl plg out, chg'd BH assy. On trip in, had to rotate & 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%, OWR 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%, OWR 73:27. B#9, Smith, F-3, in @ 5944' & drlg, 381' in 53 hrs. \$ 538,668
8/4/76	6500	Drlg sh. 28° S44W @ 6392'. Drlg 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%, OWR 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 18/20 wtr 16%, solids 11%, oil 73%, OWR 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%, OWR 82:18. B#9, Smith, F-3, in @ 5944', 820' in 115-3/4 hrs. \$562,258
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. 1H 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. BHT 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%, OWR 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%, OWR 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%, OWR 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%, OWR 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%, OWR 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%, OWR 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. Drlg 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%, OWR 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. POM 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. \$ 627,254
8/13/76 Contd		Ran bit, resumed drlg.
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/trioplite 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 FSIP. 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 IF 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.



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, C1 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.	\$ 662,949
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 C1, 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.	\$ 672,535
8/20/76	8238	Drlg Dakota. 52 RPM, 20M#. Mud 8.7#, vis 69, FL 6.0, 2/32 FC, C1 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.	\$ 686,050
8/21/76	8309	Drlg Morrison. 52 RPM, 20M#. Mud 8.6#, vis 64, FL 5.4, 2/32 FC, C1 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	\$ 691,175
8/22/76	8453	Drlg Morrison. 52 RPM, 20M#. Mud 8.6#, vis 63, FL 5.4, 2/32 FC, C1 450M ppm, Pv 17, Yld 36, Gels 25/27, solids 11.4%, wtr 12%, oil 74%, OWR 86:14. B#16, Smith	\$ 709,100
8/22/76	cont'd	F-3, in 8270' & drlg, 183' in 27-1/2 hrs.	\$ 714,425
8/23/76	8588	Drlg Morrison. 52 RPM, 20M#. Mud 8.6#, vis 60, FL 5.2, 2/32 FC, C1 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, C1 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, C1 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, C1 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, C1 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, C1 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, C1 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, C1 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, C1 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
9/02/76	9664	Sangre de Cristo, circ'g f/survey. 34° S 45W @ 9574'. 52 RPM, 30-35M#. Mud 8.6, vis 60, FL 4.0, 2/32 FC, C1 450Mppm, Pv 21, Yld 29, Gels 19/21, solids 10%, wtr 10%, oil 80%, OWR 88:12. B#18, HTC, J-44, in @ 9371' & drlg, 293' in 66-1/4 hrs.	\$ 799,028
9/03/76	9794	Drlg sd & sh. 52 RPM, 30-35M#. Mud 8.7#, 62 vis, 4.2 FL, 2/32 FC, C1 450M ppm, Pv 21, Yld 29, Gels 19/21, wtr 10%, solids 10%, oil 80%, OWR 88:12. B#18, HTC, J-44, in @ 9371' & drlg, 423' in 79 hrs.	\$ 806,353



9/04/76	9918	Sd & sh, running survey. TD @ 4 a.m. 9/4/76. 52 RPM, 30M#. Mud 8.7#, 60 vis, WL 4.2, 2/32 FC, Cl 450M ppm, Pv 19, Yld 29, Gels 18/23, wtr 10%, solids 12% oil 78%, OWR 89:11. B#18, HTC, J-44, 547' in 101 hrs. \$ 812,20
9/05/76	9918	Laying dn BH assy. 34-1/4" S48W @ 9828'; 1785' South & 1841' West, TVD 9145.19'. Est BH loc: 1819' South & 1878.81' West. Est TVD 9219.47'. Mud 8.7#, vis 69, WL 4.8, 2/32 FC, Cl 450M ppm, Pv 19, Yld 29, Gels 18/23, wtr 10%, solids 10%, oil 80%, OWR 90:10. Circ'd & cond'd hole f/logs. \$ 822,52
9/06/76	9918	WO sonic tool. Ran DIL, CNL & FDC, CDM. WLTD 9913'. 204° BHT. Attempted sonic & would not work. Mud 8.7#, 69 vis, WL 4.8, 2/32 FC, Cl 450M ppm, Pv 19, Yld 29, Gels 18/23, wtr 10%, oil 80%, solids 10%, OWR 90:10. \$ 828,35
9/07/76	9918	Circ'g at btm of 9-5/8" csg. Attempted GR-Sonic log, possible fracturing caused no results. Trip in w/Bit, 6 DC & 25 jt wt pipe to btm 9-5/8" csg. Mud 8.7#, vis 65, WL 4.8, 2/32 FC, CL 450M ppm, Pv 19, Yld 29, Gels 18/23, wtr 10%, solids 10%, oil 80%, OWR 90:10. \$ 850,17
9/08/76	9918	TD - Circ'g, prep to displ hole w/gel mud. Circ'd at btm of 9-5/8" csg, trip out, LD DC & wt pipe, PU 31 jt DP & trip in w/open ended DP to btm. Mud 8.7#, 65 vis, 4.2 FL, 2/32 FC, solids 10%. \$ 855,50
9/09/76	9918	TD - Trip out, laying dn DP. Circ'd hole, displ 800 bbl Invermul w/950 B gel mud. Work pipe out of ti spot off the btm. Set 110 sx Ty "H" w/.4% HR-4 cmt plug 9475-9175'; set 65 sx Ty "H" w/.4% HR-4 cmt plug 7600-7400'; set 125 sx Ty "H" w/1% CFR-2, 18% salt & 20# 20-40 sd/sx cmt plug 6100-5800'. \$ 870,12
9/10/76	9918	TD - <u>COMPLETED DRY HOLE 9/9/76.</u> LD DP. Tore dn BOP. Rig rel 1 p.m. 9/9/76. \$ 886,15

8/4/87

ARCO

# 8-14 SHEEP MTN UNIT BEING P+H <sup>BASE OF SURFACE CASING</sup>  
WENT IN TO TAG PLUG AT ~~BASE OF SURFACE CSG~~ )  
~~SAE~~ FOUND NOTHING, SO THEY'RE GOING TO SET ANOTHER  
PLUG. THEY LEFT  $9\frac{5}{8}$ " CSG INSIDE  $13\frac{5}{8}$ " SURFACE  
AND ARE USING 375 SRS OF CEMENT (JUST A LITTLE BIT  
GREG MC GOWEN OF CEMENT)

14-275-70W

JJK

Jim