



BILL OF MATERIAL				
MARK	QTY	SIZE	DESCRIPTION	LENGTH
1	1	1 1/2"	PIPE, API 5L, XH, GRADE B, SMLS, DRL, PE	46"
2	2	1/2"	FLEXABLE HOSE, BRAIDED	
3	1	2"	FLEXABLE HOSE, BRAIDED	
4	2	1 1/2"	FLG, RF, FNPT, 150LB	
5	2	3/4"	FLG, RF, FNPT, 150LB	
6	2	1/2"	(4) STUD BOLTS FOR 1 1/2" 150LB FLANGES, ASTM A-193, GR. B7 W/TWO (2) ASTM A-194, GR. 2H, HEAVY HEX NUTS EACH	3 1/4"
7	2	1/2"	(4) STUD BOLTS FOR 3/4" 150LB FLANGES, ASTM A-193, GR. B7 W/TWO (2) ASTM A-194, GR. 2H, HEAVY HEX NUTS EACH	3"
8	2	1 1/2"	GASKET, ANSI 150, FLEXITALLIC SPIRAL WOUND, TYPE "CGI", 316 SS WINDINGS, FLEXITALLIC CGI CENTERING RING	
9	2	3/4"	GASKET, ANSI 150, FLEXITALLIC SPIRAL WOUND, TYPE "CGI", 316 SS WINDINGS, FLEXITALLIC CGI CENTERING RING	
10	1	2"	NIPPLE, ASTM A-106, MNPT, SCH. 80, GRADE B TBE	6 1/4"
11	1	2"	NIPPLE, ASTM A-106, MNPT, SCH. 80, GRADE B TBE	4 1/2"
12	1	2"	NIPPLE, ASTM A-106, MNPT, SCH. 80, GRADE B TBE	3 1/4"
13	2	2"	NIPPLE, ASTM A-106, MNPT, SCH. 80, GRADE B TBE	2 1/4"
14	5	1 1/2"	NIPPLE, ASTM A-106, MNPT, SCH. 80, GRADE B TBE	2 1/2"
15	1	1/2"	NIPPLE, ASTM A-106, MNPT, SCH. 160, GRADE B TBE	7 1/2"
16	2	1/2"	NIPPLE, ASTM A-106, MNPT, SCH. 160, GRADE B TBE	7"
17	3	1/2"	NIPPLE, ASTM A-106, MNPT, SCH. 80, GRADE B TBE	3 1/4"
18	5	1/2"	NIPPLE, ASTM A-106, MNPT, SCH. 80, GRADE B TBE	2 1/2"
19	3	1 1/2"	ELL, 90°, FNPT, 3000#, ASTM A-105, GRADE B	
20	1	1/2"	ELL, 90°, FNPT, 3000#, ASTM A-105, GRADE B	
21	1	1 1/2"	TEE, ASTM A-106, FNPT, 3000#, GRADE B	
22	2	2"	UNION, FNPT, 3000#, ASTM A-105, GRADE B	
23	1	1 1/2"	UNION, FNPT, 3000#, ASTM A-105, GRADE B	
24	4	1/2"	UNION, FNPT, 3000#, ASTM A-105, GRADE B	
25	1	2"x1 1/2"	COUPLING RED THRD, ASTM A-105	
26	2	3/4"x1/2"	BUSHING, THRD	

NO	REVISION	DATE	APPR	BY
1	AS-BUILT	12/18/07	EK	ADJ
0	ISSUED FOR CONSTRUCTION	2/27/07	EK	ADJ

ENBRIDGE PIPELINES (ND)

BEAVER LODGE (ND) STATION

PIPING DETAIL
LUBE OIL SYSTEM CONNECTIONS

PROJECT: ENBRIDGE ND EXPANSION

SCALE: NTS	DATE: 02/16/07	DRAWN: ADJ
CHECK:	APPR:	DATE:

DWG. NO. 2409-P-003



Rooney Engineering, Inc.
12201 E. Arapahoe Rd.
Centennial, CO 80112
(303) 792-5911