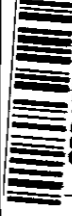




Scientific Drilling

# Black Diamond Mine

Project: Garfield County, CO  
Site: Tepee Park Ranch 36A Pad  
Well: TPR 112-6  
Wellbore: OH  
Design: Plan #1



02046557

JUN 12 2008

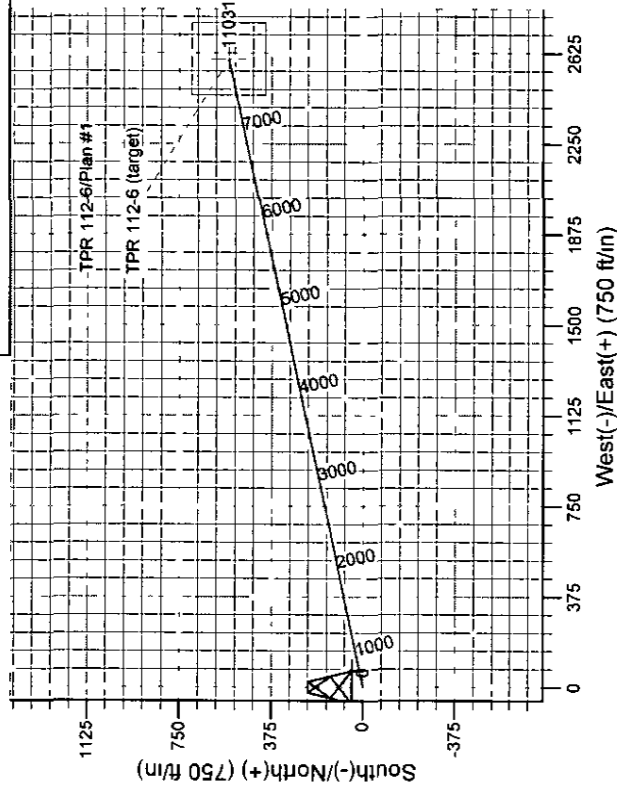
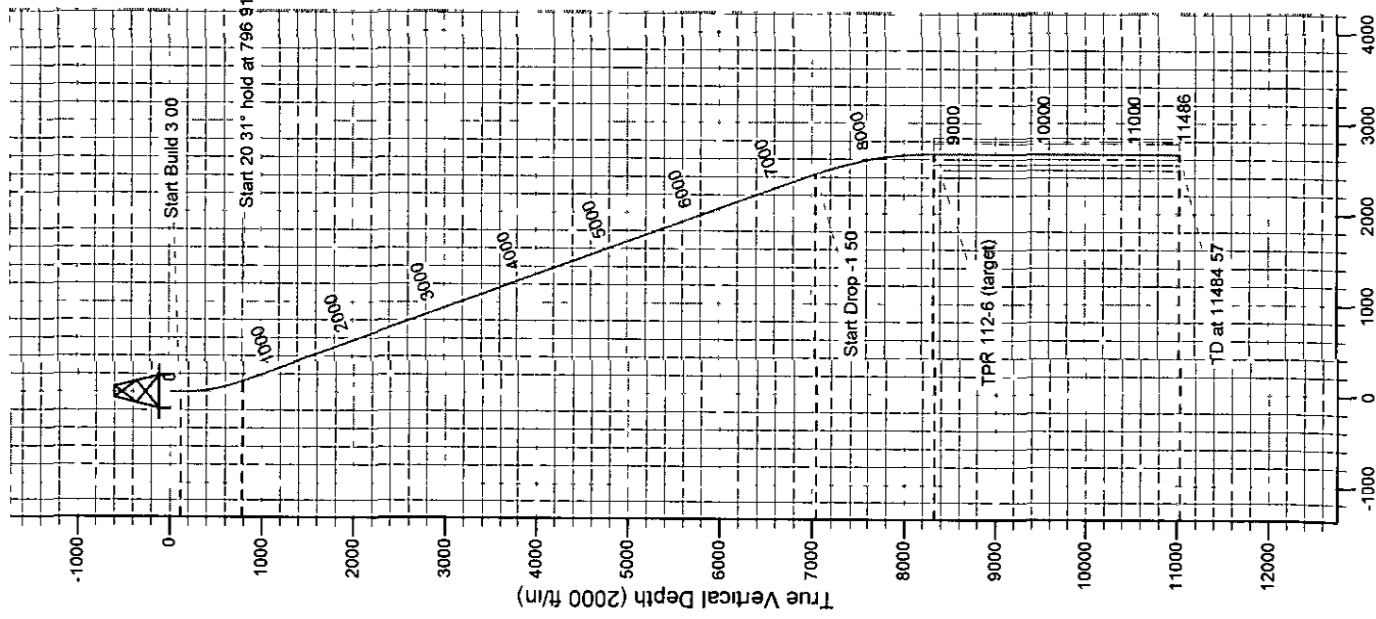
COGCC



Azimuths to True North  
Magnetic North 10.65°  
  
Magnetic Field  
Strength 52529 GsnT  
Dip Angle 65.78°  
Date 4/21/2008  
Model IGRF2005-10

## WELL DETAILS TPR 112-6

+N/-S	+E/-W	GL 9368' @ 9368 00ft (Ground Level)	Latitude	Longitude	Slot
0.00	0.00	1576937.83	2340938.13	39° 23' 39.181 N	107° 49' 56.420 W



Plan Plan #1 (TPR 112-6/OH)

Created By Chad Bloor Date 2008-06-09

PROJECT DETAILS Garfield County, CO

Geodetic System US State Plane 1983  
Datum North American Datum 1983  
Ellipsoid GRS 1980  
Zone Colorado Central Zone

System Datum Mean Sea Level  
Local North No north reference data is available

## SECTION DETAILS

Sec	MD	Inc	Ad	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
3	78.05	20.31	78.05	782.82	24.58	116.13	3.00	78.05	118.71	0.00
4	7430.76	20.31	78.05	7004.36	501.33	2368.53	0.00	0.00	2421.01	0.00
5	6784.57	0.00	0.00	6330.00	550.50	2600.80	1.50	180.00	2658.42	TPR 112-6 (target)
6	11484.57	0.00	0.00	11030.00	550.50	2600.80	0.00	0.00	2658.42	0.00

Vertical Section at 78.05° (2000 ft/in)



# SDI Planning Report

**Database** EDM 2003 16 Multi User Db  
**Company** Black Diamond Minerals, LLC  
**Project** Garfield County, CO  
**Site** Tepee Park Ranch 36A Pad  
**Well** TPR 112-6  
**Wellbore** OH  
**Design.** Plan #1

**Local Co-ordinate Reference** Well TPR 112-6  
**TVD Reference** GL 9368' @ 9368 00ft (Ground Level)  
**MD Reference** GL 9368' @ 9368 00ft (Ground Level)  
**North Reference** True  
**Survey Calculation Method** Minimum Curvature

<b>Project</b>	Garfield County, CO		<b>System Datum</b>	Mean Sea Level
<b>Map System</b>	US State Plane 1983			
<b>Geo Datum</b>	North American Datum 1983			
<b>Map Zone</b>	Colorado Central Zone			

<b>Site</b>	Tepee Park Ranch 36A Pad, Sec 36 T7S R94W			
<b>Site Position</b>	<b>Northing</b>	<b>Latitude</b>	39° 23' 44 124 N	
<b>From</b>	<b>Easting</b>	<b>Longitude</b>	107° 49' 55 092 W	
<b>Position Uncertainty</b>	<b>Slot Radius</b>	<b>Grd Convergence</b>	-1 47 °	

<b>Well</b>	TPR 112-6, <del>2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-2433-2434-2435-2436-2437-2438-2439-2440-2441-2442-2443-2444-2445-2446-2447-2448-2449-2450-2451-2452-2453-2454-2455-2456-2457-2458-2459-2460-2461-2462-2463-2464-2465-2466-2467-2468-2469-2470-2471-2472-2473-2474-2475-2476-2477-2478-2479-2480-2481-2482-2483-2484-2485-2486-2487-2488-2489-2490-2491-2492-2493-2494-2495-2496-2497-2498-2499-2500-2501-2502-2503-2504-2505-2506-2507-2508-2509-2510-2511-2512-2513-2514-2515-2516-2517-2518-2519-2520-2521-2522-2523-2524-2525-2526-2527-2528-2529-2530-2531-2532-2533-2534-2535-2536-2537-2538-2539-2540-2541-2542-2543-2544-2545-2546-2547-2548-2549-2550-2551-2552-2553-2554-2555-2556-2557-2558-2559-2560-2561-2562-2563-2564-2565-2566-2567-2568-2569-2570-2571-2572-2573-2574-2575-2576-2577-2578-2579-2580-2581-2582-2583-2584-2585-2586-2587-2588-2589-2590-2591-2592-2593-2594-2595-2596-2597-2598-2599-2600-2601-2602-2603-2604-2605-2606-2607-2608-2609-2610-2611-2612-2613-2614-2615-2616-2617-2618-2619-2620-2621-2622-2623-2624-2625-2626-2627-2628-2629-2630-2631-2632-2633-2634-2635-2636-2637-2638-2639-2640-2641-2642-2643-2644-2645-2646-2647-2648-2649-2650-2651-2652-2653-2654-2655-2656-2657-2658-2659-2660-2661-2662-2663-2664-2665-2666-2667-2668-2669-2670-2671-2672-2673-2674-2675-2676-2677-2678-2679-2680-2681-2682-2683-2684-2685-2686-2687-2688-2689-2690-2691-2692-2693-2694-2695-2696-2697-2698-2699-2700-2701-2702-2703-2704-2705-2706-2707-2708-2709-2710-2711-2712-2713-2714-2715-2716-2717-2718-2719-2720-2721-2722-2723-2724-2725-2726-2727-2728-2729-2730-2731-2732-2733-2734-2735-2736-2737-2738-2739-2740-2741-2742-2743-2744-2745-2746-2747-2748-2749-2750-2751-2752-2753-2754-2755-2756-2757-2758-2759-2760-2761-2762-2763-2764-2765-2766-2767-2768-2769-2770-2771-2772-2773-2774-2775-2776-2777-2778-2779-2780-2781-2782-2783-2784-2785-2786-2787-2788-2789-2790-2791-2792-2793-2794-2795-2796-2797-2798-2799-2800-2801-2802-2803-2804-2805-2806-2807-2808-2809-2810-2811-2812-2813-2814-2815-2816-2817-2818-2819-2820-2821-2822-2823-2824-2825-2826-2827-2828-2829-2830-2831-2832-2833-2834-2835-2836-2837-2838-2839-2840-2841-2842-2843-2844-2845-2846-2847-2848-2849-2850-2851-2852-2853-2854-2855-2856-2857-2858-2859-2860-2861-2862-2863-2864-2865-2866-2867-2868-2869-2870-2871-2872-2873-2874-2875-2876-2877-2878-2879-2880-2881-2882-2883-2884-2885-2886-2887-2888-2889-2890-2891-2892-2893-2894-2895-2896-2897-2898-2899-2900-2901-2902-2903-2904-2905-2906-2907-2908-2909-2910-2911-2912-2913-2914-2915-2916-2917-2918-2919-2920-2921-2922-2923-2924-2925-2926-2927-2928-2929-2930-2931-2932-2933-2934-2935-2936-2937-2938-2939-2940-2941-2942-2943-2944-2945-2946-2947-2948-2949-2950-2951-2952-2953-2954-2955-2956-2957-2958-2959-2960-2961-2962-2963-2964-2965-2966-2967-2968-2969-2970-2971-2972-2973-2974-2975-2976-2977-2978-2979-2980-2981-2982-2983-2984-2985-2986-2987-2988-2989-2990-2991-2992-2993-2994-2995-2996-2997-2998-2999-3000-3001-3002-3003-3004-3005-3006-3007-3008-3009-3010-3011-3012-3013-3014-3015-3016-3017-3018-3019-3020-3021-3022-3023-3024-3025-3026-3027-3028-3029-3030-3031-3032-3033-3034-3035-3036-3037-3038-3039-3040-3041-3042-3043-3044-3045-3046-3047-3048-3049-3050-3051-3052-3053-3054-3055-3056-3057-3058-3059-3060-3061-3062-3063-3064-3065-3066-3067-3068-3069-3070-3071-3072-3073-3074-3075-3076-3077-3078-3079-3080-3081-3082-3083-3084-3085-3086-3087-3088-3089-3090-3091-3092-3093-3094-3095-3096-3097-3098-3099-3100-3101-3102-3103-3104-3105-3106-3107-3108-3109-3110-3111-3112-3113-3114-3115-3116-3117-3118-3119-3120-3121-3122-3123-3124-3125-3126-3127-3128-3129-3130-3131-3132-3133-3134-3135-3136-3137-3138-3139-3140-3141-3142-3143-3144-3145-3146-3147-3148-3149-3150-3151-3152-3153-3154-3155-3156-3157-3158-3159-3160-3161-3162-3163-3164-3165-3166-3167-3168-3169-3170-3171-3172-3173-3174-3175-3176-3177-3178-3179-3180-3181-3182-3183-3184-3185-3186-3187-3188-3189-3190-3191-3192-3193-3194-3195-3196-3197-3198-3199-3200-3201-3202-3203-3204-3205-3206-3207-3208-3209-3210-3211-3212-3213-3214-3215-3216-3217-3218-3219-3220-3221-3222-3223-3224-3225-3226-3227-3228-3229-3230-3231-3232-3233-3234-3235-3236-3237-3238-3239-3240-3241-3242-3243-3244-3245-3246-3247-3248-3249-3250-3251-3252-3253-3254-3255-3256-3257-3258-3259-3260-3261-3262-3263-3264-3265-3266-3267-3268-3269-3270-3271-3272-3273-3274-3275-3276-3277-3278-3279-3280-3281-3282-3283-3284-3285-3286-3287-3288-3289-3290-3291-3292-3293-3294-3295-3296-3297-3298-3299-3300-3301-3302-3303-3304-3305-3306-3307-3308-3309-3310-3311-3312-3313-3314-3315-3316-3317-3318-3319-3320-3321-3322-3323-3324-3325-3326-3327-3328-3329-3330-3331-3332-3333-3334-3335-3336-3337-3338-3339-3340-3341-3342-3343-3344-3345-3346-3347-3348-3349-3350-3351-3352-3353-3354-3355-3356-3357-3358-3359-3360-3361-3362-3363-3364-3365-3366-3367-3368-3369-3370-3371-3372-3373-3374-3375-3376-3377-3378-3379-3380-3381-3382-3383-3384-3385-3386-3387-3388-3389-3390-3391-3392-3393-3394-3395-3396-3397-3398-3399-3400-3401-3402-3403-3404-3405-3406-3407-3408-3409-3410-3411-3412-3413-3414-3415-3416-3417-3418-3419-3420-3421-3422-3423-3424-3425-3426-3427-3428-3429-3430-3431-3432-3433-3434-3435-3436-3437-3438-3439-3440-3441-3442-3443-3444-3445-3446-3447-3448-3449-3450-3451-3452-3453-3454-3455-3456-3457-3458-3459-3460-3461-3462-3463-3464-3465-3466-3467-3468-3469-3470-3471-3472-3473-3474-3475-3476-3477-3478-3479-3480-3481-3482-3483-3484-3485-3486-3487-3488-3489-3490-3491-3492-3493-3494-3495-3496-3497-3498-3499-3500-3501-3502-3503-3504-3505-3506-3507-3508-3509-3510-3511-3512-3513-3514-3515-3516-3517-3518-3519-3520-3521-3522-3523-3524-3525-3526-3527-3528-3529-3530-3531-3532-3533-3534-3535-3536-3537-3538-3539-3540-3541-3542-3543-3544-3545-3546-3547-3548-3549-3550-3551-3552-3553-3554-3555-3556-3557-3558-3559-3560-3561-3562-3563-3564-3565-3566-3567-3568-3569-3570-3571-3572-3573-3574-3575-3576-3577-3578-3579-3580-3581-3582-3583-3584-3585-3586-3587-3588-3589-3590-3591-3592-3593-3594-3595-3596-3597-3598-3599-3600-3601-3602-3603-3604-3605-3606-3607-3608-3609-3610-3611-3612-3613-3614-3615-3616-3617-3618-3619-3620-3621-3622-3623-3624-3625-3626-3627-3628-3629-3630-3631-3632-3633-3634-3635-3636-3637-3638-3639-3640-3641-3642-3643-3644-3645-3646-3647-3648-3649-3650-3651-3652-3653-3654-3655-3656-3657-3658-3659-3660-3661-3662-3663-3664-3665-3666-3667-3668-3669-3670-3671-3672-3673-3674-3675-3676-3677-3678-3679-3680-3681-3682-3683-3684-3685-3686-3687-3688-3689-3690-3691-3692-3693-3694-3695-3696-3697-3698-3699-3700-3701-3702-3703-3704-3705-3706-3707-3708-3709-3710-3711-3712-3713-3714-3715-3716-3717-3718-3719-3720-3721-3722-3723-3724-3725-3726-3727-3728-3729-3730-3731-3732-3733-3734-3735-3736-3737-3738-3739-3740-3741-3742-3743-3744-3745-3746-3747-3748-3749-3750-3751-3752-3753-3754-3755-3756-3757-3758-3759-3760-3761-3762-3763-3764-3765-3766-3767-3768-3769-3770-3771-3772-3773-3774-3775-3776-3777-3778-3779-3780-3781-3782-3783-3784-3785-3786-3787-3788-3789-3790-3791-3792-3793-3794-3795-3796-3797-3798-3799-3800-3801-3802-3803-3804-3805-3806-3807-3808-3809-3810-3811-3812-3813-3814-3815-3816-3817-3818-3819-3820-3821-3822-3823-3824-3825-3826-3827-3828-3829-3830-3831-3832-3833-3834-3835-3836-3837-3838-3839-3840-3841-3842-3843-3844-3845-3846-3847-3848-3849-3850-3851-3852-3853-3854-3855-3856-3857-3858-3859-3860-3861-3862-3863-3864-3865-3866-3867-3868-3869-3870-3871-3872-3873-3874-3875-3876-3877-3878-3879-3880-3881-3882-3883-3884-3885-3886-3887-3888-3889-3890-3891-3892-3893-3894-3895-3896-3897-3898-3899-3900-3901-3902-3903-3904-3905-3906-3907-3908-3909-3910-3911-3912-3913-3914-3915-3916-3917-3918-3919-3920-3921-3922-3923-3924-3925-3926-3927-3928-3929-3930-3931-3932-3933-3934-3935-3936-3937-3938-3939-3940-3941-3942-3943-3944-3945-3946-3947-3948-3949-3950-3951-3952-3953-3954-3955-3956-3957-3958-3959-3960-3961-3962-3963-3964-3965-3966-3967-3968-3969-3970-3971-3972-3973-3974-3975-3976-3977-3978-3979-3980-3981-3982-3983-3984-3985-3986-3987-3988-3989-3990-3991-3992-3993-3994-3995-3996-3997-3998-3999-4000-4001-4002-4003-4004-4005-4006-4007-4008-4009-4010-4011-4012-4013-4014-4015-4016-4017-4018-4019-4020-4021-4022-4023-4024-4025-4026-4027-4028-4029-4030-4031-4032-4033-4034-4035-4036-4037-4038-4039-4040-4041-4042-4043-4044-4045-4046-4047-4048-4049-4050-4051-4052-4053-4054-4055-4056-4057-4058-4059-4060-4061-4062-4063-4064-4065-4066-4067-4068-4069-4070-4071-4072-4073-4074-4075-4076-4077-4078-4079-4080-4081-4082-4083-4084-4085-4086-4087-4088-4089-4090-4091-4092-4093-4094-4095-4096-4097-4098-4099-4100-4101-4102-4103-4104-4105-4106-4107-4108-4109-4110-4111-4112-4113-4114-4115-4116-4117-4118-4119-4120-4121-4122-4123-4124-4125-4126-4127-4128-4129-4130-4131-4132-4133-4134-4135-4136-4137-4138-4139-4140-4141-4142-4143-4144-4145-4146-4147-4148-4149-4150-4151-4152-4153-4154-4155-4156-4157-4158-4159-4160-4161-4162-4163-4164-4165-4166-4167-4168-4169-4170-4171-4172-4173-4174-4175-4176-4177-4178-4179-4180-4181-4182-4183-4184-4185-4186-4187-4188-4189-4190-4191-4192-4193-4194-4195-4196-4197-4198-4199-4200-4201-4202-4203-4204-4205-4206-4207-4208-4209-4210-4211-4212-4213-4214-4215-4216-4217-4218-4219-4220-4221-4222-4223-4224-4225-4226-4227-4228-4229-4230-4231-4232-4233-4234-4235-4236-4237-4238-4239-4240-4241-4242-4243-4244-4245-4246-4247-4248-4249-4250-4251-4252-4253-4254-4255-4256-4257-4258-4259-4260-4261-4262-4263-4264-4265-4266-4267-4268-4269-4270-4271-4272-4273-4274-4275-4276-4277-4278-4279-4280-4281-4282-4283-428</del>
-------------	--



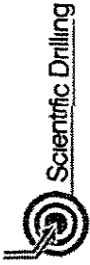
# SDI Planning Report

**Database** EDM 2003 16 Multi User Db  
**Company** Black Diamond Minerals, LLC  
**Project** Garfield County, CO  
**Site** Tepee Park Ranch 36A Pad  
**Well** TPR 112-6  
**Wellbore** OH  
**Design** Plan #1

**Local Co-ordinate Reference** Well TPR 112-6  
**TVD Reference** GL 9368' @ 9368 00ft (Ground Level)  
**MD Reference** GL 9368' @ 9368 00ft (Ground Level)  
**North Reference** True  
**Survey Calculation Method** Minimum Curvature

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
100 00	0 00	0 00	100 00	0 00	0 00	0 00	0 00	0 00	0 00
120 00	0 00	0 00	120 00	0 00	0 00	0 00	0 00	0 00	0 00
<b>Start Build 3 00</b>									
200 00	2 40	78 05	199 98	0 34	1 64	1 68	3 00	3 00	0 00
300 00	5 40	78 05	299 73	1 75	8 29	8 48	3 00	3 00	0 00
400 00	8 40	78 05	399 00	4 24	20 04	20 49	3 00	3 00	0 00
500 00	11 40	78 05	497 50	7 80	36 86	37 68	3 00	3 00	0 00
600 00	14 40	78 05	594 96	12 42	58 70	60 00	3 00	3 00	0 00
700 00	17 40	78 05	691 13	18 09	85 50	87 39	3 00	3 00	0 00
796 91	20 31	78 05	782 83	24 58	116 13	118 71	3 00	3 00	0 00
<b>Start 20 31° hold at 796 91</b>									
800 00	20 31	78 05	785 72	24 80	117 18	119 78	0 00	0 00	0 00
900 00	20 31	78 05	879 51	31 99	151 14	154 49	0 00	0 00	0 00
1,000 00	20 31	78 05	973 29	39 17	185 09	189 19	0 00	0 00	0 00
1,100 00	20 31	78 05	1,067 08	46 36	219 04	223 90	0 00	0 00	0 00
1,200 00	20 31	78 05	1,160 86	53 55	253 00	258 60	0 00	0 00	0 00
1,300 00	20 31	78 05	1,254 65	60 73	286 95	293 31	0 00	0 00	0 00
1,400 00	20 31	78 05	1,348 43	67 92	320 90	328 01	0 00	0 00	0 00
1,500 00	20 31	78 05	1,442 22	75 11	354 86	362 72	0 00	0 00	0 00
1,600 00	20 31	78 05	1,536 00	82 29	388 81	397 42	0 00	0 00	0 00
1,700 00	20 31	78 05	1,629 79	89 48	422 76	432 13	0 00	0 00	0 00
1,800 00	20 31	78 05	1,723 57	96 67	456 71	466 83	0 00	0 00	0 00
1,900 00	20 31	78 05	1,817 35	103 85	490 67	501 54	0 00	0 00	0 00
2,000 00	20 31	78 05	1,911 14	111 04	524 62	536 24	0 00	0 00	0 00
2,100 00	20 31	78 05	2,004 92	118 23	558 57	570 95	0 00	0 00	0 00
2,200 00	20 31	78 05	2,098 71	125 41	592 53	605 65	0 00	0 00	0 00
2,300 00	20 31	78 05	2,192 49	132 60	626 48	640 36	0 00	0 00	0 00
2,400 00	20 31	78 05	2,286 28	139 79	660 43	675 07	0 00	0 00	0 00
2,500 00	20 31	78 05	2,380 06	146 97	694 39	709 77	0 00	0 00	0 00
2,600 00	20 31	78 05	2,473 85	154 16	728 34	744 48	0 00	0 00	0 00
2,700 00	20 31	78 05	2,567 63	161 35	762 29	779 18	0 00	0 00	0 00
2,800 00	20 31	78 05	2,661 42	168 53	796 24	813 89	0 00	0 00	0 00
2,900 00	20 31	78 05	2,755 20	175 72	830 20	848 59	0 00	0 00	0 00
3,000 00	20 31	78 05	2,848 98	182 91	864 15	883 30	0 00	0 00	0 00
3,100 00	20 31	78 05	2,942 77	190 09	898 10	918 00	0 00	0 00	0 00
3,200 00	20 31	78 05	3,036 55	197 28	932 06	952 71	0 00	0 00	0 00
3,300 00	20 31	78 05	3,130 34	204 47	966 01	987 41	0 00	0 00	0 00
3,400 00	20 31	78 05	3,224 12	211 65	999 96	1,022 12	0 00	0 00	0 00
3,500 00	20 31	78 05	3,317 91	218 84	1,033 92	1,056 82	0 00	0 00	0 00
3,600 00	20 31	78 05	3,411 69	226 03	1,067 87	1,091 53	0 00	0 00	0 00
3,700 00	20 31	78 05	3,505 48	233 21	1,101 82	1,126 23	0 00	0 00	0 00
3,800 00	20 31	78 05	3,599 26	240 40	1,135 78	1,160 94	0 00	0 00	0 00
3,900 00	20 31	78 05	3,693 05	247 59	1,169 73	1,195 64	0 00	0 00	0 00
4,000 00	20 31	78 05	3,786 83	254 77	1,203 68	1,230 35	0 00	0 00	0 00
4,100 00	20 31	78 05	3,880 61	261 96	1,237 63	1,265 06	0 00	0 00	0 00
4,200 00	20 31	78 05	3,974 40	269 15	1,271 59	1,299 76	0 00	0 00	0 00
4,300 00	20 31	78 05	4,068 18	276 33	1,305 54	1,334 47	0 00	0 00	0 00
4,400 00	20 31	78 05	4,161 97	283 52	1,339 49	1,369 17	0 00	0 00	0 00
4,500 00	20 31	78 05	4,255 75	290 71	1,373 45	1,403 88	0 00	0 00	0 00
4,600 00	20 31	78 05	4,349 54	297 89	1,407 40	1,438 58	0 00	0 00	0 00
4,700 00	20 31	78 05	4,443 32	305 08	1,441 35	1,473 29	0 00	0 00	0 00
4,800 00	20 31	78 05	4,537 11	312 27	1,475 31	1,507 99	0 00	0 00	0 00



# SDI Planning Report

**Database** EDM 2003 16 Multi User Db  
**Company** Black Diamond Minerals, LLC  
**Project** Garfield County CO  
**Site** Teepee Park Ranch 36A Pad  
**Well** TPR 112-6  
**Wellbore** OH  
**Design** Plan #1

**Local Co-ordinate Reference** Well TPR 112-6  
**TVD Reference** GL 9368' @ 9368 00ft (Ground Level)  
**MD Reference** GL 9368' @ 9368 00ft (Ground Level)  
**North Reference** True  
**Survey Calculation Method** Minimum Curvature

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,900.00	20.31	78.05	4,630.89	319.46	1,509.26	1,542.70	0.00	0.00	0.00
5,000.00	20.31	78.05	4,724.68	326.64	1,543.21	1,577.40	0.00	0.00	0.00
5,100.00	20.31	78.05	4,818.46	333.83	1,577.16	1,612.11	0.00	0.00	0.00
5,200.00	20.31	78.05	4,912.24	341.02	1,611.12	1,646.81	0.00	0.00	0.00
5,300.00	20.31	78.05	5,006.03	348.20	1,645.07	1,681.52	0.00	0.00	0.00
5,400.00	20.31	78.05	5,099.81	355.39	1,679.02	1,716.22	0.00	0.00	0.00
5,500.00	20.31	78.05	5,193.60	362.58	1,712.98	1,750.93	0.00	0.00	0.00
5,600.00	20.31	78.05	5,287.38	369.76	1,746.93	1,785.63	0.00	0.00	0.00
5,700.00	20.31	78.05	5,381.17	376.95	1,780.88	1,820.34	0.00	0.00	0.00
5,800.00	20.31	78.05	5,474.95	384.14	1,814.84	1,855.05	0.00	0.00	0.00
5,900.00	20.31	78.05	5,568.74	391.32	1,848.79	1,889.75	0.00	0.00	0.00
6,000.00	20.31	78.05	5,662.52	398.51	1,882.74	1,924.46	0.00	0.00	0.00
6,100.00	20.31	78.05	5,756.31	405.70	1,916.70	1,959.16	0.00	0.00	0.00
6,200.00	20.31	78.05	5,850.09	412.88	1,950.65	1,993.87	0.00	0.00	0.00
6,300.00	20.31	78.05	5,943.87	420.07	1,984.60	2,028.57	0.00	0.00	0.00
6,400.00	20.31	78.05	6,037.66	427.26	2,018.55	2,063.28	0.00	0.00	0.00
6,500.00	20.31	78.05	6,131.44	434.44	2,052.51	2,097.98	0.00	0.00	0.00
6,600.00	20.31	78.05	6,225.23	441.63	2,086.46	2,132.69	0.00	0.00	0.00
6,700.00	20.31	78.05	6,319.01	448.82	2,120.41	2,167.39	0.00	0.00	0.00
6,800.00	20.31	78.05	6,412.80	456.00	2,154.37	2,202.10	0.00	0.00	0.00
6,900.00	20.31	78.05	6,506.58	463.19	2,188.32	2,236.80	0.00	0.00	0.00
7,000.00	20.31	78.05	6,600.37	470.38	2,222.27	2,271.51	0.00	0.00	0.00
7,100.00	20.31	78.05	6,694.15	477.56	2,256.23	2,306.21	0.00	0.00	0.00
7,200.00	20.31	78.05	6,787.94	484.75	2,290.18	2,340.92	0.00	0.00	0.00
7,300.00	20.31	78.05	6,881.72	491.94	2,324.13	2,375.62	0.00	0.00	0.00
7,400.00	20.31	78.05	6,975.50	499.12	2,358.08	2,410.33	0.00	0.00	0.00
7,430.76	20.31	78.05	7,004.36	501.33	2,368.53	2,421.01	0.00	0.00	0.00
7,469.87	19.72	78.05	7,041.10	504.11	2,381.62	2,434.39	1.50	-1.50	0.00
<b>Start Drop -1 50</b>									
7,500.00	19.27	78.05	7,069.50	506.19	2,391.46	2,444.45	1.50	-1.50	0.00
7,600.00	17.77	78.05	7,164.32	512.76	2,422.53	2,476.21	1.50	-1.50	0.00
7,700.00	16.27	78.05	7,259.94	518.83	2,451.17	2,505.47	1.50	-1.50	0.00
7,800.00	14.77	78.05	7,356.29	524.37	2,477.34	2,532.23	1.50	-1.50	0.00
7,900.00	13.27	78.05	7,453.31	529.38	2,501.04	2,556.45	1.50	-1.50	0.00
8,000.00	11.77	78.05	7,550.93	533.87	2,522.24	2,578.13	1.50	-1.50	0.00
8,100.00	10.27	78.05	7,649.09	537.83	2,540.94	2,597.24	1.50	-1.50	0.00
8,200.00	8.77	78.05	7,747.71	541.25	2,557.12	2,613.77	1.50	-1.50	0.00
8,300.00	7.27	78.05	7,846.73	544.14	2,570.77	2,627.72	1.50	-1.50	0.00
8,400.00	5.77	78.05	7,946.08	546.49	2,581.87	2,639.08	1.50	-1.50	0.00
8,500.00	4.27	78.05	8,045.69	548.30	2,590.43	2,647.82	1.50	-1.50	0.00
8,600.00	2.77	78.05	8,145.50	549.57	2,596.43	2,653.96	1.50	-1.50	0.00
8,700.00	1.27	78.05	8,245.43	550.30	2,599.88	2,657.48	1.50	-1.50	0.00
8,784.57	0.00	0.00	8,330.00	550.50	2,600.80	2,658.42	1.50	-1.50	-92.28
<b>Start 0 00° hold at 8784.57 - TPR 112-6 (target)</b>									
8,800.00	0.00	0.00	8,345.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00
8,900.00	0.00	0.00	8,445.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00
9,000.00	0.00	0.00	8,545.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00
9,100.00	0.00	0.00	8,645.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00
9,200.00	0.00	0.00	8,745.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00
9,300.00	0.00	0.00	8,845.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00
9,400.00	0.00	0.00	8,945.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00
9,500.00	0.00	0.00	9,045.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00
9,600.00	0.00	0.00	9,145.43	550.50	2,600.80	2,658.42	0.00	0.00	0.00



# SDI Planning Report

**Database** EDM 2003 16 Multi User Db  
**Company** Black Diamond Minerals, LLC  
**Project** Garfield County, CO  
**Site** Teepee Park Ranch 36A Pad  
**Well** TPR 112-6  
**Wellbore** OH  
**Design** Plan #1

**Local Co-ordinate Reference** Well TPR 112-6  
**TVD Reference** GL 9368' @ 9368 00ft (Ground Level)  
**MD Reference** GL 9368' @ 9368 00ft (Ground Level)  
**North Reference** True  
**Survey Calculation Method** Minimum Curvature

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,700 00	0 00	0 00	9,245 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
9,800 00	0 00	0 00	9,345 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
9,900 00	0 00	0 00	9,445 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,000 00	0 00	0 00	9,545 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,100 00	0 00	0 00	9,645 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,200 00	0 00	0 00	9,745 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,300 00	0 00	0 00	9,845 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,400 00	0 00	0 00	9,945 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,500 00	0 00	0 00	10,045 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,600 00	0 00	0 00	10,145 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,700 00	0 00	0 00	10,245 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,800 00	0 00	0 00	10,345 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
10,900 00	0 00	0 00	10,445 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
11,000 00	0 00	0 00	10,545 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
11,100 00	0 00	0 00	10,645 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
11,200 00	0 00	0 00	10,745 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
11,300 00	0 00	0 00	10,845 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
11,400 00	0 00	0 00	10,945 43	550 50	2,600 80	2,658 42	0 00	0 00	0 00
11,484 57	0 00	0 00	11,030 00	550 50	2,600 80	2,658 42	0 00	0 00	0 00
TD at 11484 57									

## Targets

### Target Name

- hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
TPR 112-6 (target)	0 00	0 00	8,330 00	550 50	2,600 80	1,577,421 38	2,343,552 21	39° 23' 44 621 N	107° 49' 23 290 W
- plan hits target center									
- Rectangle (sides W300 00 H300 00 D2,700 00)									

## Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
120 00	120 00	0 00	0 00	Start Build 3 00
796 91	782 82	21 01	99 29	Start 20 31° hold at 796 91
7 469 87	7,041 10	24 58	116 13	Start Drop -1 50
8,784 57	8,330 00	501 33	2,368 53	Start 0 00° hold at 8784 57
11 484 57	11,030 00	504 11	2 381 62	TD at 11484 57



## **Black Diamond Minerals, LLC**

Garfield County, CO  
Tepee Park Ranch 36A Pad  
TPR 112-6  
OH

Plan: Plan #1

## **Standard Planning Report**

09 June, 2008