

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-102
Revised October 12, 2005

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30528	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 35668	⁵ Property Name Carracas 32B	⁶ Well Number 7
⁷ OGRID No. 162928	⁸ Operator Name Energen Resources Corporation	⁹ Elevation 7196'

¹⁰ Surface Location

UL or lot no. E	Section 32	Township 32N	Range 04W	Lot Idn	Feet from the 1630	North/South line North	Feet from the 715	East/West line West	County Rio Arriba
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. H	Section 32	Township 32N	Range 04W	Lot Idn	Feet from the 1724	North/South line North	Feet from the 111	East/West line East	County Rio Arriba
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¹² Dedicated Acres 320 N/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13119
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RCVD SEP 28 '09
OIL CONS. DIV.

DIST. 3

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

10/2/09	1630'	1651'	1724'	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: Vicki Donaghey Date: 09/25/09 Printed Name: Vicki Donaghey
715'	SHL	1724'	BHL 111'	¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey: October 3, 2007 Signature and Seal of Professional Surveyer: original survey conducted and recorded by: DAVID R. RUSSELL Certificate Number: 10301

8 10/2

RCVD SEP 28 '09

OIL CONS. DIV.

DIST. 3

Energen Resources

Rio Arriba County, NM

Sec 32-T32N-R4W

Carracas 32B #7

Wellbore #1

Design: Actual Field Surveys

Sperry Drilling Services Standard Report

31 August, 2009

Well Coordinates: 2,165,292.29 N, 1,338,109.68 E (36° 56' 45.74" N, 107° 17' 04.34" W)

Ground Level: 7,196.00 ft

Local Coordinate Origin:

Centered on Well Carracas 32B #7

Viewing Datum:

RKB @ 7211.00ft (Original Well Elev)

TVDs to System:

N

North Reference:

True

Unit System:

API- Alt

Geodetic Scale Factor Applied

Version: 2003.16 Build: 43I

HALLIBURTON

Project: Rio Arriba County, NM
 Site: Sec 32-T32N-R4W
 Well: Carracas 32B #7
 Wellbore: Wellbore #1
 Plan: Actual Field Surveys

Energen Resources

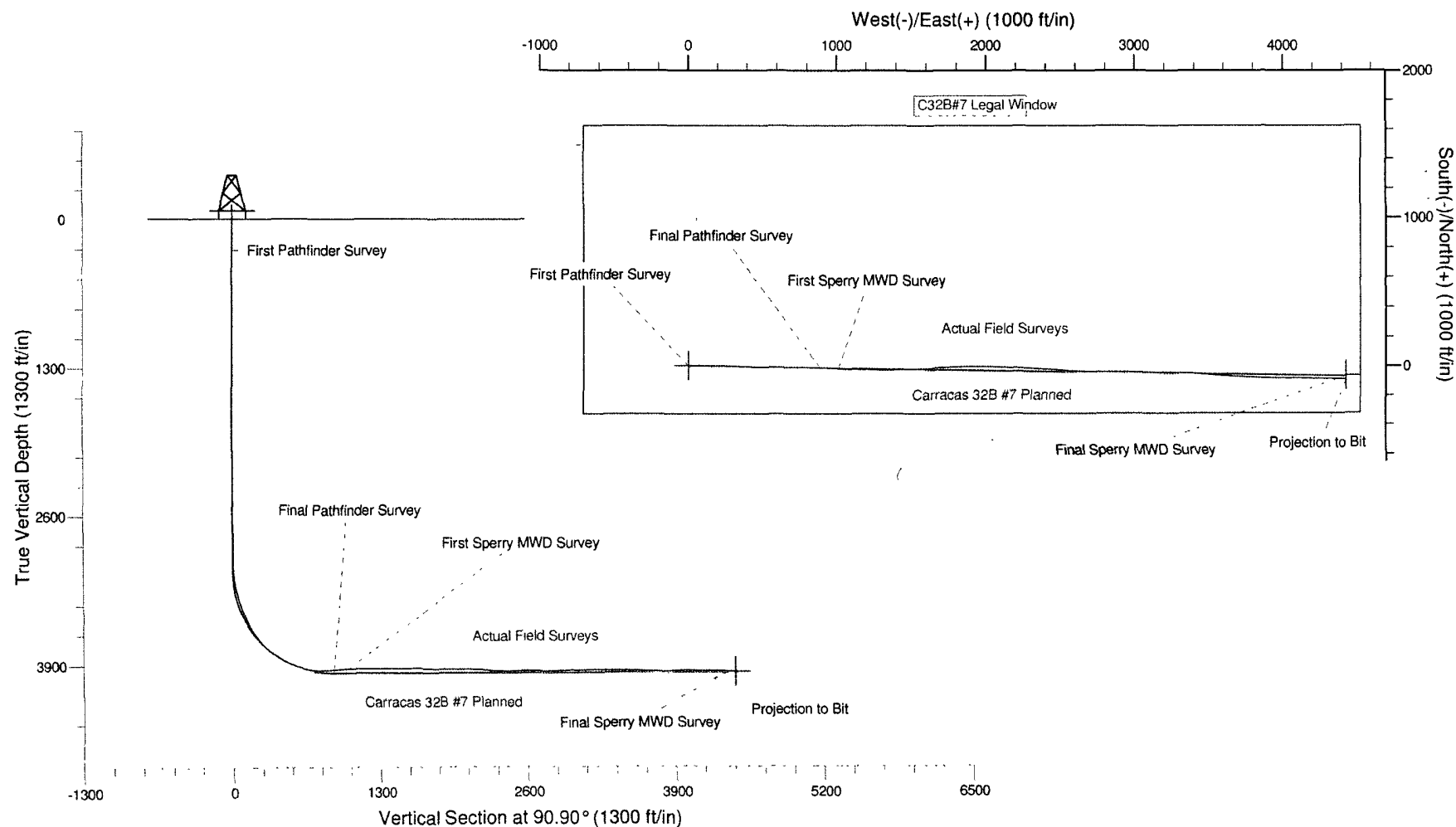
HALLIBURTON

Drilling and Formation
 Evaluation

WELLBORE TARGET DETAILS (LAT/LONG)

WELL DETAILS: Carracas 32B #7

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape	Ground Level:	7196.00		
C32B#7 Legal Window	0.00	0.00	0.00	36° 56' 45.744 N	107° 17' 4.344 W	Polygon	+E/-W	North	Easting	Latitude
C32B#7 TD	3968.00	-69.53	4427.18	36° 56' 45.053 N	107° 16' 9.807 W	Point	0.00	2165292.29	1338109.68	36° 56' 45.744 N
										107° 17' 4.344 W



Design Report for Carracas 32B #7 - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00
C32B#7 Legal Window							
265.00	1.32	320.760	264.98	2.36	-1.93	-1.97	0.50
First Pathfinder Survey							
357.00	0.09	264.710	356.97	3.18	-2.67	-2.72	1.38
447.00	0.09	111.960	446.97	3.15	-2.68	-2.73	0.19
538.00	0.18	75.420	537.97	3.15	-2.47	-2.52	0.13
630.00	0.26	18.190	629.97	3.39	-2.27	-2.32	0.24
720.00	0.09	44.700	719.97	3.63	-2.15	-2.21	0.20
810.00	0.09	251.710	809.97	3.66	-2.17	-2.23	0.19
903.00	0.18	232.770	902.97	3.55	-2.36	-2.41	0.11
992.00	0.18	182.610	991.97	3.33	-2.48	-2.53	0.17
1,083.00	0.09	40.410	1,082.97	3.24	-2.44	-2.49	0.28
1,173.00	0.18	317.390	1,172.97	3.40	-2.49	-2.54	0.21
1,263.00	0.18	144.280	1,262.97	3.38	-2.50	-2.55	0.40
1,355.00	0.26	230.460	1,354.97	3.13	-2.58	-2.62	0.33
1,446.00	0.09	167.830	1,445.96	2.93	-2.72	-2.77	0.26
1,537.00	0.35	218.390	1,536.96	2.65	-2.88	-2.92	0.33
1,629.00	0.35	196.970	1,628.96	2.16	-3.13	-3.17	0.14
1,721.00	0.79	178.100	1,720.96	1.25	-3.19	-3.21	0.51
1,811.00	0.18	92.800	1,810.95	0.63	-3.03	-3.04	0.88
1,903.00	0.09	131.750	1,902.95	0.57	-2.83	-2.84	0.13
1,997.00	0.70	122.180	1,996.95	0.22	-2.29	-2.30	0.65
2,089.00	0.62	93.080	2,088.95	-0.11	-1.32	-1.32	0.37
2,182.00	0.26	86.700	2,181.94	-0.12	-0.61	-0.61	0.39
2,275.00	0.53	57.220	2,274.94	0.12	-0.04	-0.04	0.35
2,368.00	0.26	60.110	2,367.94	0.46	0.51	0.50	0.29
2,461.00	0.26	113.880	2,460.94	0.48	0.88	0.88	0.25
2,553.00	0.44	48.150	2,552.94	0.63	1.34	1.33	0.44
2,646.00	0.62	98.370	2,645.93	0.79	2.10	2.09	0.51
2,740.00	0.44	58.840	2,739.93	0.91	2.91	2.90	0.42
2,833.00	0.26	48.370	2,832.93	1.23	3.38	3.36	0.20
2,925.00	0.26	52.640	2,924.93	1.50	3.70	3.68	0.02
3,016.00	0.35	110.920	3,015.93	1.52	4.12	4.10	0.34
3,048.00	0.88	102.220	3,047.92	1.44	4.46	4.43	1.68
3,078.00	2.55	96.700	3,077.91	1.31	5.34	5.32	5.59
3,110.00	4.57	92.460	3,109.85	1.17	7.32	7.30	6.36
3,141.00	7.12	90.870	3,140.68	1.09	10.48	10.46	8.24
3,204.00	11.61	90.860	3,202.83	0.94	20.73	20.71	7.13
3,234.00	12.84	91.780	3,232.15	0.79	27.08	27.06	4.15
3,266.00	13.72	92.270	3,263.29	0.53	34.42	34.41	2.77
3,297.00	14.77	92.330	3,293.34	0.22	42.05	42.04	3.39
3,328.00	15.92	92.170	3,323.23	-0.10	50.24	50.24	3.71
3,359.00	17.41	92.190	3,352.93	-0.44	59.13	59.13	4.81
3,389.00	19.08	91.730	3,381.42	-0.76	68.51	68.52	5.59
3,420.00	20.31	91.140	3,410.60	-1.02	78.96	78.96	4.02
3,451.00	21.72	90.690	3,439.54	-1.20	90.07	90.08	4.58
3,480.00	23.04	90.760	3,466.36	-1.34	101.11	101.12	4.55
3,511.00	24.71	89.500	3,494.70	-1.36	113.66	113.67	5.63
3,543.00	26.38	88.990	3,523.57	-1.18	127.46	127.46	5.26

HALLIBURTON

Design Report for Carracas 32B #7 - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
3,574.00	28.05	88.710	3,551.14	-0.89	141.63	141.63	5.40
3,605.00	29.81	89.200	3,578.27	-0.62	156.62	156.61	5.73
3,636.00	32.27	90.200	3,604.83	-0.54	172.60	172.59	8.11
3,668.00	34.47	90.990	3,631.55	-0.73	190.20	190.19	7.01
3,699.00	37.28	91.560	3,656.67	-1.13	208.36	208.36	9.13
3,730.00	39.04	92.050	3,681.04	-1.74	227.51	227.51	5.76
3,762.00	41.15	92.010	3,705.52	-2.47	248.10	248.11	6.59
3,793.00	43.44	91.670	3,728.45	-3.14	268.95	268.97	7.42
3,825.00	45.90	92.150	3,751.21	-3.89	291.43	291.46	7.76
3,854.00	48.36	92.650	3,770.94	-4.78	312.67	312.70	8.58
3,885.00	51.00	93.050	3,790.99	-5.96	336.27	336.32	8.57
3,916.00	53.90	93.090	3,809.88	-7.27	360.81	360.88	9.36
3,947.00	56.37	92.840	3,827.60	-8.59	386.21	386.30	8.00
3,978.00	58.21	92.440	3,844.35	-9.79	412.27	412.37	6.03
4,009.00	60.32	92.310	3,860.20	-10.89	438.89	439.00	6.82
4,040.00	63.05	91.920	3,874.90	-11.90	466.16	466.29	8.88
4,071.00	65.77	91.010	3,888.29	-12.61	494.10	494.24	9.16
4,102.00	68.32	90.390	3,900.38	-12.96	522.64	522.78	8.43
4,133.00	70.70	90.150	3,911.23	-13.09	551.68	551.82	7.71
4,164.00	72.63	90.230	3,920.98	-13.19	581.11	581.24	6.23
4,195.00	74.66	90.190	3,929.71	-13.30	610.85	610.98	6.55
4,227.00	77.03	89.960	3,937.53	-13.34	641.88	642.01	7.44
4,256.00	79.76	89.660	3,943.37	-13.25	670.28	670.41	9.47
4,288.00	83.01	89.840	3,948.16	-13.11	701.91	702.03	10.17
4,319.00	86.00	90.110	3,951.13	-13.10	732.77	732.88	9.68
4,349.00	89.08	90.590	3,952.41	-13.28	762.74	762.85	10.39
4,381.00	92.07	90.680	3,952.09	-13.63	794.73	794.85	9.35
4,412.00	92.77	91.090	3,950.78	-14.11	825.70	825.82	2.62
4,444.00	93.12	91.040	3,949.14	-14.71	857.65	857.78	1.10
4,475.00	93.83	91.170	3,947.26	-15.30	888.59	888.72	2.33
Final Pathfinder Survey							
4,596.00	93.33	93.920	3,939.70	-20.66	1,009.22	1,009.42	2.31
First Sperry MWD Survey							
4,617.00	93.40	93.960	3,938.47	-22.11	1,030.13	1,030.35	0.38
4,648.00	93.58	93.290	3,936.58	-24.06	1,061.01	1,061.26	2.23
4,678.00	88.70	91.350	3,935.99	-25.27	1,090.97	1,091.24	17.50
4,709.00	86.97	91.570	3,937.16	-26.06	1,121.94	1,122.21	5.63
4,740.00	87.96	92.000	3,938.53	-27.03	1,152.89	1,153.18	3.48
4,771.00	89.69	91.750	3,939.17	-28.04	1,183.87	1,184.16	5.64
4,802.00	90.55	91.760	3,939.10	-28.99	1,214.85	1,215.16	2.77
4,832.00	90.80	91.290	3,938.75	-29.79	1,244.84	1,245.16	1.77
4,863.00	90.43	91.800	3,938.41	-30.63	1,275.83	1,276.15	2.03
4,894.00	91.79	90.330	3,937.81	-31.20	1,306.82	1,307.14	6.46
4,925.00	91.42	89.760	3,936.95	-31.23	1,337.80	1,338.13	2.19
4,955.00	90.12	88.380	3,936.54	-30.74	1,367.80	1,368.11	6.32
4,984.00	89.26	86.910	3,936.70	-29.55	1,396.77	1,397.06	5.87
5,015.00	89.38	87.130	3,937.07	-27.94	1,427.73	1,427.99	0.81
5,044.00	89.94	88.010	3,937.24	-26.71	1,456.70	1,456.94	3.80
5,074.00	90.74	88.040	3,937.06	-25.67	1,486.68	1,486.90	2.67
5,105.00	91.60	88.420	3,936.43	-24.72	1,517.66	1,517.86	3.03
5,136.00	91.91	87.790	3,935.48	-23.69	1,548.63	1,548.81	2.26

Design Report for Carracas 32B #7 - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5,166.00	92.78	87.550	3,934.25	-22.47	1,578.58	1,578.73	3.01
5,197.00	92.28	86.770	3,932.88	-20.94	1,609.51	1,609.64	2.99
5,227.00	87.04	85.190	3,933.06	-18.84	1,639.42	1,639.52	18.24
5,258.00	85.55	85.080	3,935.06	-16.21	1,670.25	1,670.29	4.82
5,289.00	85.99	86.020	3,937.35	-13.81	1,701.07	1,701.07	3.34
5,320.00	87.22	87.600	3,939.19	-12.09	1,731.96	1,731.94	6.45
5,350.00	88.09	88.130	3,940.41	-10.98	1,761.92	1,761.87	3.39
5,381.00	88.77	88.270	3,941.26	-10.00	1,792.89	1,792.83	2.24
5,412.00	88.89	88.810	3,941.90	-9.21	1,823.87	1,823.79	1.78
5,442.00	88.83	89.160	3,942.49	-8.68	1,853.86	1,853.77	1.18
5,473.00	89.20	89.180	3,943.03	-8.23	1,884.85	1,884.75	1.20
5,504.00	89.81	89.850	3,943.29	-7.97	1,915.85	1,915.74	2.92
5,535.00	90.06	90.480	3,943.33	-8.06	1,946.85	1,946.74	2.19
5,565.00	90.19	90.450	3,943.26	-8.30	1,976.85	1,976.74	0.44
5,596.00	90.49	90.650	3,943.08	-8.60	2,007.85	2,007.74	1.16
5,627.00	90.99	90.760	3,942.68	-8.98	2,038.84	2,038.73	1.65
5,657.00	90.99	91.350	3,942.16	-9.53	2,068.83	2,068.73	1.97
5,687.00	87.34	91.740	3,942.60	-10.34	2,098.81	2,098.72	12.24
5,718.00	88.09	93.200	3,943.83	-11.68	2,129.76	2,129.68	5.29
5,749.00	88.40	92.870	3,944.78	-13.32	2,160.70	2,160.64	1.46
5,779.00	85.92	91.870	3,946.27	-14.56	2,190.64	2,190.60	8.91
5,810.00	83.94	91.800	3,949.01	-15.55	2,221.50	2,221.47	6.39
5,841.00	84.74	91.980	3,952.07	-16.56	2,252.33	2,252.31	2.64
5,872.00	86.23	92.650	3,954.51	-17.81	2,283.21	2,283.21	5.27
5,902.00	86.91	92.590	3,956.30	-19.18	2,313.12	2,313.14	2.28
5,933.00	87.53	92.930	3,957.81	-20.67	2,344.05	2,344.09	2.28
5,964.00	87.84	93.670	3,959.06	-22.45	2,374.97	2,375.03	2.59
5,995.00	89.94	93.640	3,959.66	-24.43	2,405.90	2,405.99	6.77
6,026.00	91.60	94.120	3,959.24	-26.53	2,436.83	2,436.94	5.57
6,055.00	92.28	94.590	3,958.26	-28.73	2,465.73	2,465.87	2.85
6,086.00	91.98	94.180	3,957.11	-31.10	2,496.61	2,496.79	1.64
6,117.00	91.48	94.160	3,956.17	-33.35	2,527.52	2,527.73	1.61
6,148.00	91.17	94.140	3,955.45	-35.59	2,558.43	2,558.67	1.00
6,179.00	88.40	93.080	3,955.57	-37.55	2,589.36	2,589.63	9.57
6,209.00	87.90	92.640	3,956.54	-39.04	2,619.31	2,619.60	2.22
6,240.00	87.34	92.630	3,957.83	-40.47	2,650.25	2,650.56	1.81
6,270.00	87.47	92.630	3,959.19	-41.84	2,680.19	2,680.51	0.43
6,301.00	88.33	92.410	3,960.32	-43.20	2,711.14	2,711.48	2.86
6,332.00	90.25	91.110	3,960.71	-44.15	2,742.12	2,742.47	7.48
6,362.00	91.05	89.800	3,960.37	-44.39	2,772.11	2,772.47	5.12
6,393.00	91.30	89.920	3,959.73	-44.32	2,803.11	2,803.46	0.89
6,423.00	91.79	90.120	3,958.92	-44.33	2,833.10	2,833.44	1.76
6,453.00	92.60	90.040	3,957.77	-44.37	2,863.07	2,863.42	2.71
6,485.00	93.27	90.330	3,956.13	-44.47	2,895.03	2,895.37	2.28
6,517.00	92.72	90.180	3,954.46	-44.61	2,926.99	2,927.33	1.78
6,549.00	91.73	90.530	3,953.22	-44.81	2,958.96	2,959.30	3.28
6,580.00	89.88	90.500	3,952.78	-45.09	2,989.96	2,990.30	5.97
6,612.00	88.83	90.640	3,953.14	-45.41	3,021.95	3,022.29	3.31
6,643.00	89.20	90.880	3,953.68	-45.82	3,052.95	3,053.29	1.42
6,675.00	90.31	91.410	3,953.81	-46.46	3,084.94	3,085.29	3.84
6,707.00	91.49	91.750	3,953.31	-47.34	3,116.92	3,117.28	3.84

Design Report for Carracas 32B #7 - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
6,739.00	90.86	90.830	3,952.65	-48.06	3,148.91	3,149.27	3.48
6,770.00	91.23	90.210	3,952.09	-48.34	3,179.90	3,180.27	2.33
6,802.00	90.19	90.180	3,951.69	-48.45	3,211.90	3,212.26	3.25
6,834.00	88.15	91.110	3,952.16	-48.81	3,243.89	3,244.26	7.01
6,866.00	87.44	91.760	3,953.39	-49.61	3,275.85	3,276.23	3.01
6,897.00	88.08	92.270	3,954.60	-50.70	3,306.81	3,307.20	2.64
6,928.00	88.52	93.040	3,955.52	-52.14	3,337.76	3,338.17	2.86
6,960.00	89.32	93.430	3,956.12	-53.94	3,369.71	3,370.14	2.78
6,992.00	90.25	93.650	3,956.24	-55.92	3,401.65	3,402.10	2.99
7,023.00	89.75	94.480	3,956.24	-58.12	3,432.57	3,433.06	3.13
7,055.00	89.14	94.730	3,956.55	-60.69	3,464.46	3,464.99	2.06
7,087.00	89.75	94.830	3,956.86	-63.35	3,496.35	3,496.91	1.93
7,119.00	88.58	94.480	3,957.33	-65.95	3,528.24	3,528.84	3.82
7,151.00	87.65	94.410	3,958.38	-68.43	3,560.13	3,560.76	2.91
7,182.00	87.59	94.630	3,959.67	-70.87	3,591.00	3,591.67	0.74
7,214.00	87.16	93.860	3,961.13	-73.23	3,622.88	3,623.58	2.75
7,246.00	87.53	93.370	3,962.62	-75.25	3,654.78	3,655.51	1.92
7,278.00	87.71	93.480	3,963.94	-77.16	3,686.70	3,687.46	0.66
7,310.00	87.96	92.320	3,965.15	-78.78	3,718.63	3,719.41	3.71
7,342.00	89.01	92.310	3,966.00	-80.07	3,750.60	3,751.39	3.28
7,374.00	90.12	92.460	3,966.24	-81.40	3,782.57	3,783.38	3.50
7,406.00	91.79	92.620	3,965.71	-82.82	3,814.53	3,815.36	5.24
7,437.00	93.33	92.640	3,964.32	-84.24	3,845.47	3,846.31	4.97
7,469.00	92.97	92.070	3,962.57	-85.55	3,877.39	3,878.26	2.10
7,501.00	92.16	91.400	3,961.13	-86.52	3,909.34	3,910.22	3.28
7,533.00	92.47	91.470	3,959.84	-87.32	3,941.31	3,942.19	0.99
7,565.00	90.12	91.160	3,959.12	-88.06	3,973.29	3,974.18	7.41
7,596.00	89.94	91.020	3,959.10	-88.65	4,004.28	4,005.18	0.74
7,628.00	88.52	90.250	3,959.53	-89.00	4,036.28	4,037.18	5.05
7,660.00	87.84	89.610	3,960.55	-88.96	4,068.26	4,069.16	2.92
7,692.00	87.77	90.210	3,961.77	-88.91	4,100.24	4,101.13	1.89
7,723.00	89.13	90.780	3,962.61	-89.18	4,131.22	4,132.11	4.76
7,755.00	91.11	91.400	3,962.55	-89.79	4,163.22	4,164.11	6.48
7,787.00	92.16	91.760	3,961.63	-90.67	4,195.19	4,196.10	3.47
7,819.00	90.25	90.930	3,960.96	-91.42	4,227.17	4,228.09	6.51
7,851.00	88.83	90.450	3,961.22	-91.81	4,259.17	4,260.08	4.68
7,883.00	87.59	90.820	3,962.22	-92.16	4,291.15	4,292.07	4.04
7,915.00	88.27	90.820	3,963.37	-92.62	4,323.13	4,324.05	2.12
7,946.00	88.33	90.840	3,964.29	-93.07	4,354.11	4,355.03	0.20
Final Sperry MWD Survey							
8,018.79	88.33	90.840	3,966.41	-94.13	4,426.86	4,427.80	0.00
C32B#7 TD							
8,019.00	88.33	90.840	3,966.42	-94.14	4,427.07	4,428.00	0.00
Projection to Bit							