

gyro/data

Gyrodata Incorporated
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L57# 0015-12

42 791

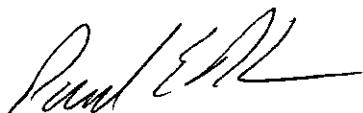
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MAY 17 2012

OFFICE OF CONSERVATION
WELL FILES DIVISION

State of Texas
County of Harris

I, Paul E. Neumann, certify that; I am employed by Gyrodata Inc.; that I am authorized and qualified to review the Rate Gyro Multishot survey from a depth of 0 feet to a depth of 1800 feet conducted on the day(s) of 3/6/2012 through 3/8/2012; that this survey was conducted at the request of Hilcorp Energy Company for the Goodrich C #004 Well in St. Martin Parish, Louisiana; that the data is true, correct, complete, and within the limitations of the tool as set forth by Gyrodata Inc.; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Gyrodata Inc.



Paul E. Neumann
Gulf Coast District Manager

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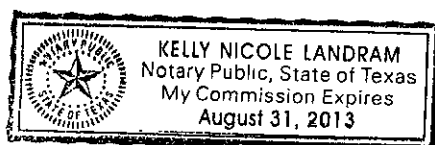
MAY 18 2012


OFFICE OF CONSERVATION
LAFAYETTE DISTRICT

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned, a Notary Public in and for the County and State, on this day personally appeared Paul E. Neumann
Whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes consideration therein expressed.

GIVEN under my hand and seal of office this 16 th day of March 2012.




Kelly Nicole Landram
Notary Public in and for
State of Texas, County of Harris
My Commission Expires August 31, 2013

A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

HILCORP ENERGY COMPANY

Lease: Goodrich C Well: 004, 5" Drillpipe

Location: Axxis Freedom, St. Martin Parish, Louisiana

Job Number: HT0312G00219

Run Date: 08 Mar 2012

Surveyor: CJ Hegwald

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Company Man

Survey Latitude: 29.794417 deg. N Longitude: 91.321583 deg. W

Azimuth Correction:

Gyro: -0.01000 deg to Grid North

Proposed Well Direction: 164.580 deg

Depth Reference: Rotary Table

Rotary Table Elevation: 30.40

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

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OFFICE OF CONSERVATION
LAFAYETTE DISTRICT

A Gyrodata Directional Survey

Hilcorp Energy Company
 Lease: Goodrich C Well: 004, 5" Drillpipe
 Location: Axxis Freedom, St. Martin Parish, Louisiana
 Job Number: HT0312G00219

MEASURED IN C LAZIMUTH VERTICAL DOGLEG VERTICAL CLOSURE HORIZONTAL
 DEPTH SECTION SEVERITY DEPTH DIST. AZIMUTH COORDINATES
 feet deg. feet deg. feet deg. feet

0.00 0.00 0.00 0.0 0.0 0.0 0.0 N 0.00 E

0 - 1800 FT RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 5" DRILLPIPE
 ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO AXXIS FREEDOM R.K.B. OF 30.4 FT

100.00	0.13	206.60	0.1	0.13	100.00	0.1	206.6	0.10 S	0.05 W
200.00	0.41	191.81	0.5	0.29	200.00	0.6	197.5	0.55 S	0.17 W
300.00	0.20	124.49	0.9	0.38	300.00	1.0	185.9	1.00 S	0.10 W
400.00	0.41	163.20	1.4	0.28	400.00	1.5	174.3	1.44 S	0.14 E
500.00	0.56	178.10	2.3	0.19	499.99	2.3	173.4	2.27 S	0.26 E
600.00	0.56	138.34	3.2	0.38	599.99	3.2	169.1	3.13 S	0.60 E
700.00	0.47	122.19	3.9	0.17	699.98	3.9	161.0	3.71 S	1.28 E
800.00	0.10	112.39	4.3	0.37	799.98	4.3	156.7	3.96 S	1.70 E
900.00	0.33	138.10	4.6	0.24	899.98	4.7	154.9	4.21 S	1.98 E
1000.00	0.42	73.41	4.8	0.41	999.98	5.0	149.7	4.32 S	2.52 E
1100.00	0.48	54.73	4.7	0.16	1099.98	5.1	141.0	3.97 S	3.21 E
1200.00	0.53	31.29	4.2	0.21	1199.97	5.1	131.3	3.34 S	3.80 E
1300.00	0.15	62.97	3.9	0.41	1299.97	5.1	124.8	2.88 S	4.15 E
1400.00	0.41	144.74	4.2	0.42	1399.97	5.5	124.8	3.11 S	4.48 E
1500.00	0.49	175.66	5.0	0.25	1499.97	6.1	129.1	3.83 S	4.71 E
1600.00	0.47	170.72	5.8	0.05	1599.96	6.7	134.1	4.66 S	4.81 E
1700.00	0.37	164.04	6.5	0.11	1699.96	7.3	137.3	5.38 S	4.97 E
1800.00	0.59	154.80	7.3	0.23	1799.96	8.1	139.4	6.16 S	5.28 E

Final Station Closure: Distance: 8.11 ft Az: 139.40 deg.

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