

30-015-42457

A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

BOPCO, LP.

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 29 2015

RECEIVED

Lease: BIG SINKS 2-24 30 STATE Well: #3H, 8" DRILL COLLARS
Location: MCVAY RIG #1, EDDY COUNTY, NEW MEXICO

gyrodata

Job Number: MD0814GBM838

Azimuth Correction:

Gyro: -0.25000 deg to Grid North

Run Date: 17 Aug 2014

Report Generated: 26 Aug 2014 12:33

Depth Reference: Rotary Table

Surveyor: Jason Solomon

Air Gap (RKB to Ground / RKB to MSL): 20.00

Calculation Method: MINIMUM CURVATURE

Vertical Section Calculated from Well Head Location

Survey surface coordinates obtained from: Well Plan/Plot

Closure Calculated from Well Head Location

Survey Latitude: 32.247114 deg. N Longitude: 103.858575 deg. W

Horizontal Coordinates Calculated from Well Head Location

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
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0.00	0.00	0.00	0.00	0.00	0.0 0.0	0.00 N 0.00 E
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0 TO 770 FT. RATE GYROSCOPIC BATTERY MULTISHOT RUN INSIDE 8" DRILL COLLARS
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO MCVAY RIG #1 RKB 20 FT.

100.00	0.91	146.60	0.91	100.00	0.8 146.6	0.66 S 0.44 E
200.00	1.02	155.06	0.18	199.98	2.5 149.6	2.13 S 1.25 E
300.00	1.18	159.08	0.18	299.96	4.4 152.9	3.89 S 1.99 E
400.00	1.28	161.62	0.12	399.94	6.5 155.4	5.91 S 2.71 E
500.00	1.13	165.81	0.17	499.92	8.6 157.4	7.93 S 3.30 E
600.00	1.29	170.62	0.18	599.90	10.7 159.6	10.00 S 3.73 E
700.00	1.42	176.06	0.19	699.87	13.0 162.1	12.35 S 3.99 E
770.00	1.74	179.46	0.47	769.84	14.8 164.1	14.28 S 4.06 E

Final Station Closure: Distance: 14.84 ft Az: 164.11 deg.

