



NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 20, 2015

RECEIVED

October 9, 2014

30-015-39813

COG Operating LLC (Concho)
One Concho Center
600 W. Illinois Avenue
Midland, TX 79701

Attn: Kanicia Castillo

Re: **Bradley 8 Fee 4H**

Please find enclosed a copy of the survey from 0' to 2,420' ran on the above referenced well.

If I can be of any further service, please do not hesitate to call me at 800-606-4976.

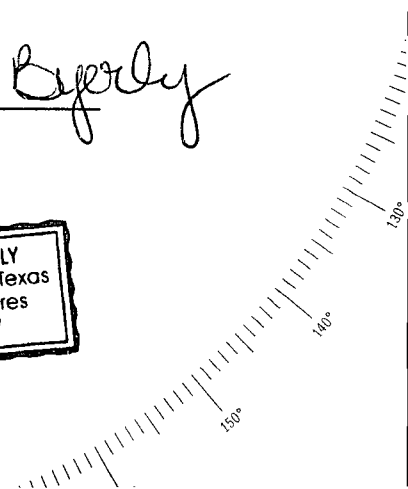
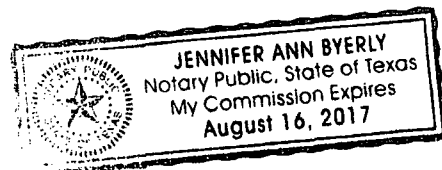
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 9 day of October A.D., 2014, by Keith Havelka.

Jennifer Byerly
Notary Public, State of Texas





Company: COG Operating
 Lease/Well: Bradley 8 Fee/4H
 Location: Sec 8 T19S R26E
 Rig Name: Silver Oak 3
 State/County: New Mexico/Eddy
 Latitude: 32.67, Longitude: -104.40
 GRID North is 0.04 Degrees West of True North
 VS-Azi: 0.00 Degrees



Depth Reference : RKB=17 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: bradley 8 fee #4h-de_01.ut
 Minimum Curvature Method
 Report Date/Time: 10/9/2014 / 12:12

VES Survey International
 West Texas.
 (432) 563-5444

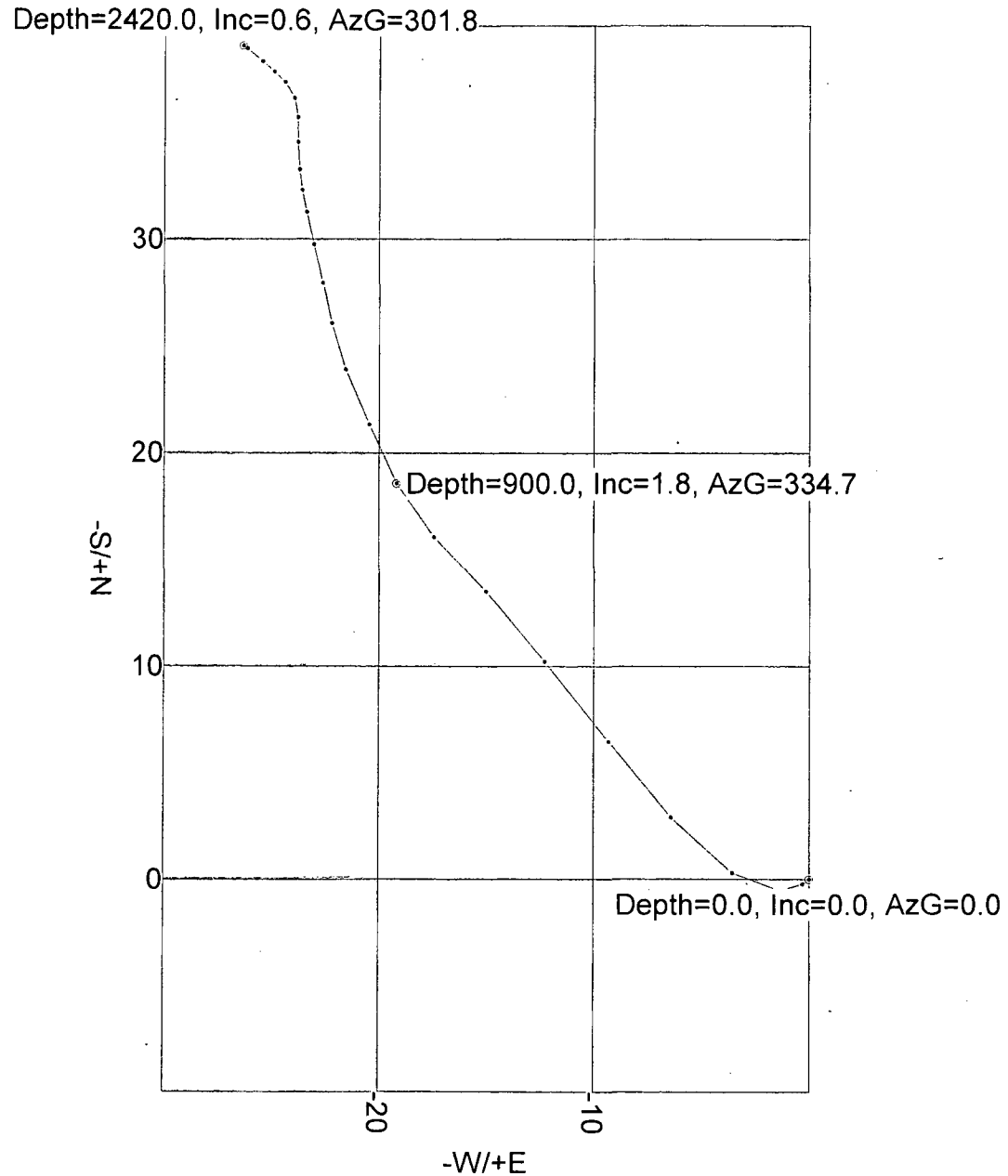
Surveyor: Chris Bankson
 Bradley 8 Fee 4H / API 30-015-39813

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.44	231.98	100.00	-0.24	-0.30	-0.24	0.38	231.98	0.44
200.00	0.86	265.20	199.99	-0.54	-1.35	-0.54	1.46	248.36	0.55
300.00	1.96	301.32	299.96	0.29	-3.56	0.29	3.57	274.66	1.36
400.00	2.53	321.51	399.89	2.91	-6.39	2.91	7.02	294.44	0.96
500.00	2.77	320.30	499.78	6.49	-9.31	6.49	11.35	304.88	0.24
600.00	2.71	322.78	599.67	10.23	-12.28	10.23	15.98	309.79	0.13
700.00	2.22	316.59	699.57	13.51	-15.04	13.51	20.21	311.94	0.56
800.00	1.80	316.49	799.51	16.05	-17.44	16.05	23.71	312.62	0.42
900.00	1.75	334.69	899.47	18.57	-19.18	18.57	26.69	314.08	0.56
1000.00	1.74	335.28	999.42	21.33	-20.46	21.33	29.56	316.19	0.02
1100.00	1.48	338.67	1099.38	23.91	-21.56	23.91	32.20	317.95	0.27
1200.00	1.12	349.92	1199.35	26.07	-22.21	26.07	34.25	319.58	0.44
1300.00	1.10	345.29	1299.33	27.96	-22.62	27.96	35.96	321.02	0.09
1400.00	1.01	348.80	1399.32	29.75	-23.04	29.75	37.63	322.25	0.11
1500.00	0.76	345.76	1499.31	31.26	-23.37	31.26	39.03	323.22	0.26
1600.00	0.45	352.59	1599.30	32.29	-23.58	32.29	39.98	323.86	0.32
1700.00	0.66	353.62	1699.30	33.25	-23.70	33.25	40.83	324.52	0.21
1800.00	0.82	359.01	1799.29	34.53	-23.77	34.53	41.92	325.46	0.18

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.50	359.54	1899.28	35.69	-23.79	35.69	42.89	326.32	0.32
2000.00	0.57	341.47	1999.28	36.60	-23.95	36.60	43.74	326.80	0.18
2100.00	0.45	315.19	2099.27	37.35	-24.38	37.35	44.60	326.86	0.26
2200.00	0.35	310.88	2199.27	37.82	-24.89	37.82	45.28	326.65	0.11
2300.00	0.48	311.93	2299.27	38.30	-25.43	38.30	45.98	326.42	0.14
2400.00	0.60	309.05	2399.26	38.92	-26.15	38.92	46.89	326.10	0.12
2420.00	0.62	301.82	2419.26	39.04	-26.33	39.04	47.09	326.00	0.39



VES Survey International
West Texas
(432) 563-5444
Surveyor: Chris Bankson
Bradley 8 Fee 4H / API 30-015-39813



VES Survey Date: 10/1/2014