

Results of Directional Survey

API number:	30-025-40819		
OGRID:		Operator:	CIMAREX ENERGY CO.
		Property:	HANSON 26 FEDERAL COM # 2H

surface	ULSTR:	C	26	T	20S	R	34E
				530	FNL	1930	FWL

BH Loc	ULSTR:	N	26	T	20S	R	34E
15289	MD	11111.7	TVD	345	FSL	1995	FWL
				4935	FNL		

Top Perf/OH	ULSTR:	C	26	T	20S	R	34E
11100	MD	11017.0	TVD	761	FNL	1928	FWL

Bot Perf/OH	ULSTR:	N	26	T	20S	R	34E
15262	MD	11111.8	TVD	372	FSL	1995	FWL
				4908	FNL		

	MD	N/S	E/W	VD
	11095	-226.97	-2.24	11014.49
TOP PERFS/OH	11100	-231.29	-1.76	11016.95
	11123	-251.18	0.45	11028.28
	15219	-4334.73	65.58	11112.07
BOT PERFS/OH	15262	-4377.73	65.00	11111.83
	15289	-4404.73	64.64	11111.68

NEXT TO LAST	15219	-4334.73	65.58	11112.07
LAST READING	15289	-4404.73	64.64	11111.68
TD	15289	-4404.73	64.64	11111.68

Surface Location	530	FN	1930	FW
Projected BHL	4935	FN	1995	FW
Location of				
Top Perfs/OH	761	FN	1928	FW
Bottom Perfs/OH	4908	FN	1995	FW

SUMMARY of Subsurface Locations

Surface Location	C-26-20S-34E	530	FN	1930	FW	Vert. Depth
Top Perfs/OH	C-26-20S-34E	761	FN	1928	FW	11016.95
Bottom Perfs/OH	N-26-20S-34E	4908	FN	1995	FW	11111.83
Projected TD	N-26-20S-34E	4935	FN	1995	FW	11111.68

AUG 29 2013

Reservoir Development

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

February 21, 2013

Cimarex

600 N MARIENFELD STREET SUITE 600

MIDLAND, TX 79701

Re:

CLIENT: Cimarex
WELL: Hanson 26 Federal Com No. 2
FIELD: Lea Bone Spring; South
RIG: Cactus 115
COUNTY: Lea
API NO: 30-025-40819
JOB NO: 13MLD0032

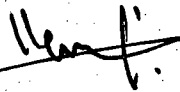
C-26-20S-34E 530 FNL 1930 FWL
N 32.54991 W 103.53324

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation.
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Robert Hargrave MWD	Hanson 26 Federal Com No. 2 Original Hole	10555.00 Ft to 15219.00 Ft	February 9, 2013 to February 15, 2013	SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Jasem Alharer
Field Service Manager



Reservoir Development

Drilling & Measurements (Anadrill)

4301 SW 44th St

Oklahoma City, Oklahoma 73119 USA

Phone: (405) 682-2284

Fax: (405) 682-3937

Well Reference:

C-26-20S-34E 530 FNL 1930 FWL

N 32.54991 W 103.53324

I, Robert Hargrave certify that; I am employed by Drilling & Measurements (formerly Anadrill), a division of Schlumberger Technology Corporation; that I did on the day(s) of February 09, 2013 through February 15, 2013, conduct or supervise the taking of the SlimPulse surveys from a depth of 10555.00 feet to a depth of 15219.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Cimarex for the Hanson 26 Federal Com No. 2 Well (Original Hole) API No. 30-025-40819 and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By

Robert Hargrave

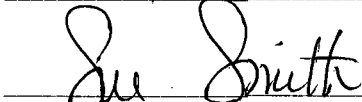
MWD



Subscribed and Sworn to before me this 21st day of FEBRUARY (month) 2013 (yr)

My Commission expires:

8/23/14

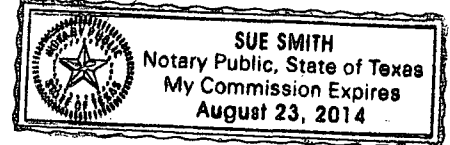


Notary Public

MIDLAND Co. TX

(County State)

(signature)



Client: Cimarex Energy Co.
Field: Lea Bone Spring, South
Well: Hanson 26 Federal Com No. 2
API number: 30-025-40819
Engineer: Robert Hargrave
Country: New Mexico
State: Lea
County: Lea
City: Cactus 115
Latitude: 32° 32' 59.674" N
Longitude: 103° 31' 59.662" W
Spud date: 20-Jan-13
Last survey date: 15-Feb-13
Total accepted surveys: 68
MD of first survey: 10555.00 ft
MD of last survey: 15219.00 ft
Survey calculation methods: Minimum curvature
Method for DLS: Lubinski
Depth reference: MSL
Driller's Depth
GL above permanent: 3688.00
KB above permanent: 3706.00
DF above permanent: 3706.00
Vertical section origin
Latitude (+N/-): 0.00 ft
Departure (+E/-): 0.00 ft
Grid Coordinates
NAD27 Texas State Plane, Central Zone, US Feet
X: 787868.80 ft
Y: 564713.90 ft
Azimuth from Vsect Origin to target: 178.92 degrees

MWD Survey Reference Criteria

Run1
Calculation Date: 7-Feb-2013
Location G.: 998.94325 mgn
Tolerance G.: 2.50 mgn
Location B.: 48632.64 nT
Tolerance B.: 300.00 nT
Magnetic Dip: 60.4179 degrees
Tolerance Dip: 0.45 degrees

Run2
Calculation Date: 11-Feb-2013
Location G.: 998.94325 mgn
Tolerance G.: 2.50 mgn
Location B.: 48631.23 nT
Tolerance B.: 300.00 nT
Magnetic Dip: 60.4175 degrees
Tolerance Dip: 0.45 degrees

Run1
Magnetic dec (+E/-): 7.4939 degrees
Grid Conv (+E/-): 0.4339 degrees
Total Azim Corr (+E/-): 7.06 degrees

Run2
Magnetic dec (+E/-): 7.4927 degrees
Grid Conv (+E/-): 0.4327 degrees
Total Azim Corr (+E/-): 7.06 degrees

Survey Correction Index Description

0 = Uncorrected 1 = Sag Corrected
2 = DMAG Corrected 3 = Sag + DMAG Corrected

Seq	MD	Incl	Azim	Course	TVD	V Sec	N-S	E-W	Closure	at Azi	DLS	Tool	Correction
1	0.00	0.00	0.00	-999.25	0.00	0.00	0.00	0.00	0.00	0	90.00	0.00	0
2	100.00	0.39	35.32	100.00	100.00	-0.27	0.28	0.20	0.34	0.39	35.32	0.14	0
3	200.00	0.26	46.56	100.00	200.00	-0.70	0.71	0.56	0.9	38.12	35.32	0.14	0
4	300.00	0.04	338.52	100.00	300.00	-0.89	0.90	0.71	1.15	38.28	35.88	0.25	0
5	400.00	0.10	228.25	100.00	400.00	-0.86	0.87	0.63	1.08	35.88	35.29	0.12	0
6	500.00	0.22	212.76	100.00	500.00	-0.65	0.65	0.46	0.8	35.29	30.60	0.13	0
7	600.00	0.25	226.10	-100.00	600.00	-0.34	0.34	0.20	0.4	30.60	29.05	0.06	0
8	700.00	0.56	267.09	100.00	699.99	-0.17	0.17	-0.44	0.47	290.53	276.31	0.41	0
9	800.00	0.53	271.61	100.00	799.99	-0.18	0.15	-1.39	1.4	276.31	267.91	0.05	0
10	900.00	0.43	260.97	100.00	899.99	-0.15	0.11	-2.23	2.23	272.78	269.87	0.13	0
11	1000.00	0.39	260.53	100.00	999.98	-0.05	-0.01	-2.93	2.93	269.87	267.91	0.04	0
12	1100.00	0.26	253.53	100.00	1099.98	0.06	-0.13	-3.49	3.49	267.91	265.31	0.14	0
13	1200.00	0.41	247.00	100.00	1199.98	0.26	-0.33	-4.03	4.05	265.31	262.41	0.15	0
14	1300.00	0.55	249.25	100.00	1299.98	0.55	-0.64	-4.81	4.85	262.41	262.41	0.14	0

15	1400.00	0.73	252.54	100.00	1399.97	0.89	-1.00	-5.87	5.95	260.31	0.18	GyroTool	0
16	1500.00	0.77	253.16	100.00	1499.96	1.75	-1.39	-7.12	7.25	258.97	0.04	GyroTool	0
17	1600.00	0.77	257.42	100.00	1599.95	1.75	-1.73	-8.42	8.59	258.39	0.06	GyroTool	0
18	1700.00	0.68	247.86	100.00	1699.94	1.92	-2.10	-9.62	9.85	257.69	0.15	GyroTool	0
19	1800.00	0.52	223.27	100.00	1799.94	3.13	-2.65	-10.48	10.81	255.80	0.30	GyroTool	0
20	1900.00	0.69	206.13	100.00	1899.93	3.13	-3.52	-11.06	11.61	252.33	0.25	GyroTool	0
21	2000.00	0.75	201.39	100.00	1999.93	4.46	-4.67	-11.56	12.47	247.99	0.08	GyroTool	0
22	2100.00	0.79	198.80	100.00	2099.92	5.71	-5.94	-12.02	13.41	243.73	0.05	GyroTool	0
23	2200.00	0.79	211.76	100.00	2199.91	6.94	-7.17	-12.61	14.51	240.36	0.18	GyroTool	0
24	2300.00	0.80	213.29	100.00	2299.90	8.09	-8.34	-13.36	15.75	238.00	0.02	GyroTool	0
25	2400.00	0.81	217.81	100.00	2399.89	9.22	-9.49	-14.17	17.05	236.20	0.06	GyroTool	0
26	2500.00	0.85	219.59	100.00	2499.88	10.33	-10.62	-15.08	18.44	234.85	0.05	GyroTool	0
27	2600.00	0.88	219.55	100.00	2599.87	11.48	-11.78	-16.04	19.9	233.70	0.03	GyroTool	0
28	2700.00	0.90	219.25	100.00	2699.85	12.66	-12.98	-17.03	21.41	232.68	0.02	GyroTool	0
29	2800.00	0.76	211.58	100.00	2799.84	13.81	-14.15	-17.87	22.8	231.62	0.18	GyroTool	0
30	2900.00	0.42	185.72	100.00	2899.84	14.74	-15.08	-18.75	23.68	230.43	0.42	GyroTool	0
31	3000.00	0.31	127.05	100.00	2999.84	15.27	-15.61	-18.07	23.88	229.18	0.37	GyroTool	0
32	3100.00	0.32	120.88	100.00	3099.83	15.58	-15.92	-17.62	23.74	227.90	0.04	GyroTool	0
33	3200.00	0.33	125.46	100.00	3199.83	15.90	-16.23	-17.14	23.61	226.57	0.03	GyroTool	0
34	3300.00	0.33	129.98	100.00	3299.83	16.26	-16.58	-16.69	23.52	225.19	0.03	GyroTool	0
35	3400.00	1.36	345.96	100.00	3399.82	15.29	-15.61	-16.76	22.9	227.02	1.64	GyroTool	0
36	3500.00	1.32	4.98	100.00	3499.80	12.99	-13.31	-16.94	21.55	231.84	0.44	GyroTool	0
37	3600.00	1.05	17.90	100.00	3599.77	10.98	-11.30	-16.56	20.05	235.71	0.38	GyroTool	0
38	3700.00	1.27	25.49	100.00	3699.75	9.12	-9.42	-15.80	18.4	239.19	0.27	GyroTool	0
39	3800.00	1.38	25.39	100.00	3799.73	7.05	-7.34	-14.81	16.53	243.65	0.11	GyroTool	0
40	3900.00	1.39	23.65	100.00	3899.70	4.88	-5.14	-13.81	14.73	249.60	0.04	GyroTool	0
41	4000.00	1.29	22.38	100.00	3999.67	2.74	-2.98	-12.89	13.23	256.97	0.10	GyroTool	0
42	4100.00	1.23	75.70	100.00	4099.65	0.75	-0.98	-12.00	12.04	265.35	0.09	GyroTool	0
43	4200.00	1.16	28.63	100.00	4199.63	1.09	-1.05	-11.05	11.08	274.55	0.09	GyroTool	0
44	4300.00	0.90	33.68	100.00	4299.61	2.61	-2.42	-10.13	10.41	283.45	0.28	GyroTool	0
45	4400.00	0.88	76.79	100.00	4399.60	3.94	-3.76	-9.35	10.07	291.92	0.11	GyroTool	0
46	4500.00	0.88	22.30	100.00	4499.59	5.32	-5.16	-8.71	10.12	300.63	0.07	GyroTool	0
47	4600.00	0.72	6.87	100.00	4599.58	6.65	-6.49	-8.34	10.57	307.88	0.27	GyroTool	0
48	4700.00	0.57	359.51	100.00	4699.57	7.77	-7.61	-8.27	11.24	312.62	0.17	GyroTool	0
49	4800.00	0.63	359.66	100.00	4799.56	8.81	-8.66	-8.28	11.98	316.30	0.06	GyroTool	0
50	4900.00	0.63	354.98	100.00	4899.56	9.91	-9.76	-8.32	12.82	319.53	0.05	GyroTool	0
51	5000.00	0.58	317.76	100.00	4999.55	10.84	-10.68	-8.71	13.78	320.79	0.39	GyroTool	0
52	5100.00	0.65	314.84	100.00	5099.55	11.63	-11.45	-9.46	14.85	320.46	0.08	GyroTool	0
53	5200.00	0.93	339.60	100.00	5199.54	12.80	-12.61	-10.14	16.18	321.20	0.44	GyroTool	0
54	5300.00	1.06	342.88	100.00	5299.52	14.46	-14.26	-10.70	17.82	323.13	0.14	GyroTool	0
55	5400.00	1.12	343.58	100.00	5399.50	16.29	-16.08	-11.24	19.62	325.04	0.06	GyroTool	0
56	5500.00	1.01	345.81	100.00	5499.49	18.09	-17.87	-11.74	21.38	326.71	0.12	GyroTool	0
57	5600.00	1.02	342.91	100.00	5599.47	19.80	-19.58	-12.21	23.07	328.04	0.05	GyroTool	0
58	5700.00	0.83	350.49	100.00	5699.46	21.38	-21.14	-12.60	24.61	329.22	0.23	GyroTool	0
59	5800.00	0.80	350.57	100.00	5799.45	22.78	-22.55	-12.83	25.94	330.36	0.03	GyroTool	0
60	5900.00	0.75	355.43	100.00	5899.44	24.13	-23.89	-13.00	27.19	331.45	0.08	GyroTool	0
61	6000.00	0.72	356.86	100.00	5999.43	25.41	-25.17	-13.08	28.36	332.53	0.04	GyroTool	0
62	6100.00	0.72	0.85	100.00	6099.42	26.66	-26.42	-13.11	29.49	333.61	0.05	GyroTool	0
63	6200.00	0.76	4.46	100.00	6199.41	27.95	-27.71	-13.05	30.63	334.79	0.06	GyroTool	0
64	6300.00	0.82	4.61	100.00	6299.40	29.32	-29.09	-12.94	31.83	336.02	0.06	GyroTool	0
65	6400.00	0.88	1.42	100.00	6399.39	30.80	-30.57	-12.86	33.16	337.18	0.08	GyroTool	0
66	6500.00	0.86	1.18	100.00	6499.38	32.32	-32.08	-12.83	34.55	338.21	0.02	GyroTool	0
67	6600.00	0.70	0.78	100.00	6599.37	33.68	-33.45	-12.80	35.81	339.05	0.16	GyroTool	0
68	6700.00	0.56	2.35	100.00	6699.37	34.78	-34.54	-12.77	36.83	339.71	0.14	GyroTool	0
69	6800.00	0.46	12.39	100.00	6799.36	35.66	-35.43	-12.67	37.62	340.32	0.13	GyroTool	0
70	6900.00	0.47	21.64	100.00	6899.36	36.43	-36.20	-12.43	38.27	341.05	0.08	GyroTool	0
71	7000.00	0.53	30.08	100.00	6999.36	37.20	-37.00	-12.05	38.89	341.95	0.09	GyroTool	0
72	7100.00	0.54	46.24	100.00	7099.35	37.92	-37.71	-11.48	39.41	343.07	0.15	GyroTool	0
73	7200.00	0.54	45.84	100.00	7199.35	38.56	-38.36	-10.80	39.85	344.28	0.00	GyroTool	0
74	7300.00	0.56	55.45	100.00	7299.34	39.15	-38.97	-10.06	40.24	345.53	0.09	GyroTool	0
75	7400.00	0.68	53.66	100.00	7399.34	39.76	-39.59	-9.18	40.64	346.95	0.12	GyroTool	0
76	7500.00	0.73	52.68	100.00	7499.33	40.48	-40.33	-8.19	41.16	348.52	0.05	GyroTool	0
77	7600.00	0.76	51.03	100.00	7599.32	41.26	-41.14	-7.17	41.76	350.11	0.04	GyroTool	0
78	7700.00	0.80	45.48	100.00	7699.31	42.15	-42.04	-6.16	42.49	351.67	0.09	GyroTool	0
79	7800.00	0.80	42.28	100.00	7799.30	43.14	-43.05	-5.19	43.36	353.13	0.04	GyroTool	0
80	7900.00	0.77	42.75	100.00	7899.29	44.13	-44.06	-4.26	44.26	354.47	0.03	GyroTool	0
81	8000.00	0.72	47.92	100.00	7999.28	45.03	-44.97	-3.34	45.1	355.75	0.08	GyroTool	0
82	8100.00	0.73	51.07	100.00	8099.28	45.83	45.79	-2.38	45.86	357.03	0.04	GyroTool	0
83	8200.00	0.72	63.51	100.00	8199.27	46.49	46.47	-1.32	46.49	358.37	0.16	GyroTool	0
84	8300.00	0.80	74.57	100.00	8299.26	46.93	46.94	-0.09	46.94	359.90	0.17	GyroTool	0
85	8400.00	0.86	81.63	100.00	8399.25	47.20	47.24	1.33	47.25	361.61	0.12	GyroTool	0
86	8500.00	0.93	88.02	100.00	8499.24	47.31	47.37	2.88	47.46	363.48	0.12	GyroTool	0
87	8600.00	1.04	103.94	100.00	8599.22	47.09	47.18	4.58	47.4	365.54	0.29	GyroTool	0
88	8700.00	1.02	112.67	100.00	8699.21	46.49	46.62	6.28	47.04	367.67	0.16	GyroTool	0
89	8800.00	1.06	116.06	100.00	8799.19	45.71	45.87	7.93	46.55	369.81	0.07	GyroTool	0
90	8900.00	1.13	126.03	100.00	8899.17	44.70	44.88	9.56	45.89	372.02	0.20	GyroTool	0
91	9000.00	1.20	129.48	100.00	8999.15	43.42	43.64	11.16	45.04	374.35	0.10	GyroTool	0
92	9100.00	1.41	155.06	100.00	9099.13	41.61	41.86	12.49	43.68	376.62	0.61	GyroTool	0
93	9150.00	1.41	159.52	50.00	9149.11	40.47	40.72	12.97	42.74	378.66	0.22	GyroTool	0
94	9200.00	1.58	160.16	56.00	9205.09	39.09	39.35	13.47	41.59	380.89	0.31	3rd Party MWD	0
95	9202.00	1.41	168.47	96.00	9301.06	36.68	36.95	14.15	39.57	383.05	0.29	3rd Party MWD	0
96	9302.00	1.49	177.57	93.00	9394.03	34.34	34.62	14.43	37.51	385.63	0.26	3rd Party MWD	0
97	9489.00	1.49	181.17	94.00	9488.00	31.90	32.18	14.46	35.28	387.20	0.10	3rd Party MWD	0
98	9586.00	1.49	173.57	97.00	9584.96	29.38	29.66	14.58	33.05	389.05	0.20	3rd Party MWD	0
99	9680.00	1.80	179.94	94.00	9678.93	26.69	26.97	14.71	30.73	391.61	0.38	3rd Party MWD	0
100	9775.00	2.02	181.56	95.00	9773.87	23.53	23.81	14.67	27.96	394.31	0.24	3rd Party MWD	0
101	9870.00	1.71	182.14	95.00	9868.82	20.44	20.72	14.57	25.33	396.12	0.33	3rd Party MWD	0

102	9964.00	1.80	187.85	94.00	9962.78	-17.58	17.85	14.32	22.89	38.73	0.21	3rd Party MWD	0
103	10058.00	1.80	196.24	94.00	10056.73	-14.71	14.97	13.70	20.3	42.47	0.28	3rd Party MWD	0
104	10156.00	1.41	185.65	98.00	10154.69	-12.05	12.30	13.15	18.01	46.93	0.50	3rd Party MWD	0
105	10250.00	1.32	190.75	94.00	10248.67	-9.84	10.08	12.84	16.32	51.86	0.16	3rd Party MWD	0
106	10345.00	1.41	217.03	95.00	10343.64	-7.85	8.07	11.93	14.41	55.92	0.66	3rd Party MWD	0
107	10440.00	1.58	223.14	95.00	10438.61	-5.99	6.18	10.33	12.04	59.10	0.25	3rd Party MWD	0
108	10534.00	1.32	227.75	94.00	10532.58	-4.35	4.51	8.64	9.75	62.44	0.30	3rd Party MWD	0
109	10555.00	1.48	229.03	21.00	10553.57	-4.01	4.17	8.26	9.25	63.22	0.79	SlimPulse	0
110	10587.00	1.41	236.39	32.00	10585.56	-3.54	3.68	7.62	8.46	64.22	0.62	SlimPulse	0
111	10650.00	6.18	191.11	63.00	10648.41	0.20	-0.08	6.32	6.32	90.72	8.39	SlimPulse	2
112	10682.00	11.72	196.15	32.00	10680.01	4.99	-4.90	5.08	7.06	133.93	17.47	SlimPulse	2
113	10716.00	16.50	200.78	34.00	10712.98	12.77	-12.73	2.41	12.96	169.30	14.43	SlimPulse	2
114	10746.00	19.25	202.66	30.00	10741.53	21.26	-21.28	-1.01	21.3	182.72	9.37	SlimPulse	2
115	10776.00	22.54	202.03	30.00	10769.55	31.07	-31.18	-5.07	31.59	189.24	10.99	SlimPulse	2
116	10807.00	25.51	196.80	31.00	10797.87	42.90	-43.08	-9.23	44.06	192.10	11.78	SlimPulse	2
117	10840.00	29.07	190.20	33.00	10827.19	57.53	-57.78	-12.71	59.16	192.41	14.14	SlimPulse	2
118	10870.00	33.02	184.42	30.00	10852.90	72.82	-73.11	-14.63	74.56	191.32	16.48	SlimPulse	2
119	10901.00	36.91	180.30	31.00	10878.30	90.55	-90.85	-15.33	92.14	189.58	14.67	SlimPulse	2
120	10933.00	39.31	178.33	32.00	10903.48	110.29	-110.60	-15.09	111.62	187.77	8.41	SlimPulse	2
121	10963.00	41.58	175.54	30.00	10926.31	129.74	-130.02	-14.03	130.78	186.16	9.68	SlimPulse	2
122	10996.00	43.92	173.48	33.00	10950.54	152.06	-152.32	-11.88	152.78	184.46	8.26	SlimPulse	2
123	11028.00	47.11	172.58	32.00	10972.96	174.77	-174.97	-9.11	175.21	182.98	10.17	SlimPulse	2
124	11062.00	50.82	172.29	34.00	10995.28	200.25	-200.39	-5.73	200.47	181.64	10.93	SlimPulse	2
125	11095.00	57.95	172.75	33.00	11014.49	226.89	-226.97	-2.25	226.98	180.57	21.64	SlimPulse	2
126	11123.00	63.02	174.50	28.00	11028.28	251.15	-251.18	0.45	251.18	179.90	18.91	SlimPulse	2
127	11155.00	65.65	176.59	32.00	11042.14	279.93	-279.93	2.68	279.95	179.45	10.11	SlimPulse	2
128	11186.00	68.83	177.73	31.00	11054.13	308.50	-308.48	4.10	308.51	179.24	10.80	SlimPulse	2
129	11218.00	72.32	179.02	32.00	11064.77	338.67	-338.64	4.95	338.68	179.16	11.55	SlimPulse	2
130	11249.00	75.27	180.05	31.00	11073.42	368.44	-368.40	5.19	368.44	179.19	10.04	SlimPulse	2
131	11280.00	77.56	180.72	31.00	11080.70	398.56	-398.53	4.99	398.57	179.28	7.68	SlimPulse	2
132	11312.00	80.26	180.37	32.00	11086.85	429.94	-429.93	4.69	429.96	179.38	8.51	SlimPulse	2
133	11343.00	83.52	179.97	31.00	11091.23	460.62	-460.62	4.60	460.64	179.43	10.59	SlimPulse	2
134	11382.00	87.78	179.31	39.00	11094.18	499.50	-499.50	4.84	499.52	179.44	11.05	SlimPulse	2
135	11422.00	88.03	179.06	40.00	11095.65	539.47	-539.46	5.41	539.49	179.43	0.88	SlimPulse	2
136	11454.00	87.69	178.99	32.00	11096.84	571.45	-571.44	5.95	571.47	179.40	1.08	SlimPulse	2
137	11486.00	87.27	179.15	32.00	11098.25	603.42	-603.40	6.47	603.44	179.39	1.40	SlimPulse	2
138	11518.00	86.24	178.95	32.00	11100.06	635.37	-635.35	7.00	635.38	179.37	3.28	SlimPulse	2
139	11609.00	86.83	178.92	91.00	11105.56	726.20	-726.16	8.69	726.22	179.31	0.65	SlimPulse	2
140	11708.00	91.16	179.24	99.00	11107.30	825.16	-825.11	10.28	825.18	179.29	4.39	SlimPulse	2
141	11804.00	89.17	178.06	96.00	11107.02	921.15	-921.08	12.54	921.16	179.22	2.41	SlimPulse	2
142	11899.00	88.72	177.49	95.00	11108.77	1016.12	-1015.99	16.23	1016.12	179.08	0.76	SlimPulse	2
143	11995.00	88.82	179.03	96.00	11110.83	1112.08	-1111.92	19.14	1112.09	179.01	1.61	SlimPulse	2
144	12185.00	88.82	177.71	190.00	11114.74	1302.03	-1301.80	24.55	1302.03	178.92	0.69	SlimPulse	2
145	12281.00	88.75	177.61	96.00	11116.78	1397.99	-1397.70	28.47	1397.99	178.83	0.13	SlimPulse	2
146	12376.00	89.55	177.48	95.00	11118.19	1492.95	-1492.60	32.53	1492.95	178.75	0.85	SlimPulse	2
147	12470.00	89.82	177.60	94.00	11118.70	1586.92	-1586.51	36.57	1586.93	178.68	0.31	SlimPulse	2
148	12566.00	89.75	177.69	96.00	11119.06	1682.89	-1682.43	40.51	1682.92	178.62	0.12	SlimPulse	2
149	12661.00	89.72	177.63	95.00	11119.50	1777.87	-1777.35	44.39	1777.9	178.57	0.07	SlimPulse	2
150	12756.00	89.80	177.42	95.00	11119.90	1872.84	-1872.26	48.49	1872.89	178.52	0.24	SlimPulse	2
151	12851.00	89.75	177.30	95.00	11120.28	1967.81	-1967.16	52.87	1967.87	178.46	0.14	SlimPulse	2
152	12945.00	89.84	177.73	94.00	11120.61	2061.78	-2061.07	56.95	2061.86	178.42	0.47	SlimPulse	2
153	13040.00	89.76	178.19	95.00	11120.94	2156.76	-2156.01	60.33	2156.85	178.40	0.49	SlimPulse	2
154	13136.00	89.87	178.71	96.00	11121.25	2252.76	-2251.97	62.92	2252.85	178.40	0.55	SlimPulse	2
155	13231.00	89.84	178.99	95.00	11121.49	2347.76	-2346.95	64.83	2347.85	178.42	0.30	SlimPulse	2
156	13326.00	89.77	179.21	95.00	11121.82	2442.76	-2441.94	66.32	2442.84	178.44	0.24	SlimPulse	2
157	13422.00	90.19	178.42	96.00	11121.85	2538.76	-2537.92	68.31	2538.84	178.46	0.93	SlimPulse	2
158	13517.00	90.42	178.45	95.00	11121.34	2633.75	-2632.88	70.90	2633.84	178.46	0.24	SlimPulse	2
159	13612.00	90.36	178.65	95.00	11120.70	2728.75	-2727.85	73.31	2728.83	178.46	0.22	SlimPulse	2
160	13707.00	90.39	178.94	95.00	11120.08	2823.74	-2822.83	75.30	2823.83	178.47	0.31	SlimPulse	2
161	13803.00	90.39	179.47	96.00	11119.42	2919.74	-2918.81	76.64	2919.82	178.50	0.55	SlimPulse	2
162	13898.00	90.25	179.88	95.00	11118.89	3014.73	-3013.81	77.18	3014.8	178.53	0.46	SlimPulse	2
163	13993.00	90.15	180.47	95.00	11118.56	3109.71	-3108.81	76.89	3109.76	178.58	0.63	SlimPulse	2
164	14088.00	90.22	180.32	95.00	11118.25	3204.67	-3203.81	76.23	3204.71	178.64	0.17	SlimPulse	2
165	14183.00	90.25	180.41	95.00	11117.86	3299.64	-3298.80	75.63	3299.67	178.69	0.10	SlimPulse	2
166	14276.00	90.39	180.43	93.00	11117.34	3392.61	-3391.80	74.94	3392.63	178.73	0.15	SlimPulse	2
167	14371.00	90.28	180.41	95.00	11116.79	3487.58	-3486.80	74.25	3487.59	178.78	0.12	SlimPulse	2
168	14465.00	90.25	180.50	94.00	11116.35	3581.54	-3580.79	73.50	3581.55	178.82	0.10	SlimPulse	2
169	14560.00	90.28	180.48	95.00	11115.92	3676.50	-3675.79	72.69	3676.51	178.87	0.04	SlimPulse	2
170	14655.00	90.21	180.57	95.00	11115.51	3771.47	-3770.78	71.82	3771.47	178.91	0.12	SlimPulse	2
171	14751.00	90.35	180.65	96.00	11115.04	3867.42	-3866.78	70.80	3867.42	178.95	0.17	SlimPulse	2
172	14846.00	90.36	180.58	95.00	11114.45	3962.38	-3961.77	69.78	3962.38	178.99	0.07	SlimPulse	2
173	14941.00	90.63	180.72	95.00	11113.63	4057.33	-4056.76	68.70	4057.34	179.03	0.32	SlimPulse	2
174	15035.00	90.26	180.63	94.00	11112.90	4151.29	-4150.75	67.59	4151.3	179.07	0.41	SlimPulse	2
175	15131.00	90.32	180.59	96.00	11112.41	4247.24	-4246.74	66.57	4247.26	179.10	0.08	SlimPulse	2
176	15219.00	90.32	180.77	88.00	11111.92	4335.20	-4334.73	65.52	4335.23	179.13	0.20	SlimPulse	2
177	15289.00	90.32	180.77	70.00	11111.53	4405.16	-4404.73	64.58	4405.2	179.16	0.00	PROJ	0



Cimarex Hanson 26 Federal Com #2H Gyro+MWD 0ft to 15289ft MD

(Non-Def Survey)

Report Date: February 16, 2013 - 10:13 AM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cactus 115 / Cimarex Hanson 26 Federal Com #2H
Well: Cimarex Hanson 26 Federal Com #2H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Hanson 26 Federal Com #2H Gyro+MWD 0ft to Update
Survey Date: January 31, 2013
Tort / AHD / DDI / ERD Ratio: 134.100 ° / 4572.147 ft / 5.926 / 0.411
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 32' 59.67402", W 103° 31' 59.66162"
Location Grid N/E Y/X: N 564713.900 ftUS, E 787868.800 ftUS
CRS Grid Convergence Angle: 0.4305 °
Grid Scale Factor: 0.99997869

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 178.920 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3706.000 ft above MSL
Seabed / Ground Elevation: 3688.000 ft above MSL
Magnetic Declination: 7.496 °
Total Gravity Field Strength: 998.4866mgn (9.80665 Based)
Total Magnetic Field Strength: 48635.113 nT
Magnetic Dip Angle: 60.419 °
Declination Date: January 31, 2013
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.4305 °
Total Corr Mag North->Grid North: 7.0657 °

Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
SHL Hanson 26 Fed Com #2H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	35.32M
	100.00	0.39	35.32	100.00	-0.27	0.28	0.20	0.34	35.32	0.39	46.56M
	200.00	0.26	46.56	200.00	-0.70	0.71	0.56	0.90	38.12	0.14	338.52M
	300.00	0.04	338.52	300.00	-0.89	0.90	0.71	1.15	38.28	0.25	228.25M
	400.00	0.10	228.25	400.00	-0.86	0.87	0.63	1.08	35.88	0.12	212.76M
	500.00	0.22	212.76	500.00	-0.65	0.65	0.46	0.80	35.29	0.13	226.1M
	600.00	0.25	226.10	600.00	-0.34	0.34	0.20	0.40	30.60	0.06	267.09M
	700.00	0.56	267.09	699.99	-0.17	0.17	-0.44	0.47	290.53	0.41	271.61M
	800.00	0.53	271.61	799.99	-0.18	0.15	-1.39	1.40	276.31	0.05	260.97M
	900.00	0.43	260.97	899.99	-0.15	0.11	-2.23	2.23	272.78	0.13	260.53M
	1000.00	0.39	260.53	999.98	-0.05	-0.01	-2.93	2.93	269.87	0.04	253.53M
	1100.00	0.26	253.53	1099.98	0.06	-0.13	-3.49	3.49	267.91	0.14	247M
	1200.00	0.41	247.00	1199.98	0.26	-0.33	-4.03	4.05	265.31	0.15	249.25M
	1300.00	0.55	249.25	1299.98	0.55	-0.64	-4.81	4.85	262.41	0.14	252.54M
	1400.00	0.73	252.54	1399.97	0.89	-1.00	-5.87	5.95	260.31	0.18	253.16M
	1500.00	0.77	253.16	1499.96	1.25	-1.39	-7.12	7.25	258.97	0.04	257.42M
	1600.00	0.77	257.42	1599.95	1.57	-1.73	-8.42	8.59	258.39	0.06	247.86M
	1700.00	0.68	247.86	1699.94	1.92	-2.10	-9.62	9.85	257.69	0.15	223.27M
	1800.00	0.52	223.27	1799.94	2.45	-2.65	-10.48	10.81	255.80	0.30	206.13M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	1900.00	0.69	206.13	1899.93	3.31	-3.52	-11.06	11.61	252.33	0.25	201.39M
	2000.00	0.75	201.39	1999.93	4.46	-4.67	-11.56	12.47	247.99	0.08	198.8M
	2100.00	0.79	198.80	2099.92	5.71	-5.94	-12.02	13.41	243.73	0.05	211.76M
	2200.00	0.79	211.76	2199.91	6.94	-7.17	-12.61	14.51	240.36	0.18	213.29M
	2300.00	0.80	213.29	2299.90	8.09	-8.34	-13.36	15.75	238.00	0.02	217.81M
	2400.00	0.81	217.81	2399.89	9.22	-9.49	-14.17	17.05	236.20	0.06	219.59M
	2500.00	0.85	219.59	2499.88	10.33	-10.62	-15.08	18.44	234.85	0.05	219.55M
	2600.00	0.88	219.55	2599.87	11.48	-11.78	-16.04	19.90	233.70	0.03	219.25M
	2700.00	0.90	219.25	2699.85	12.66	-12.98	-17.03	21.41	232.68	0.02	211.58M
	2800.00	0.76	211.58	2799.84	13.81	-14.15	-17.87	22.80	231.62	0.18	185.72M
	2900.00	0.42	185.72	2899.84	14.74	-15.08	-18.25	23.68	230.43	0.42	127.05M
	3000.00	0.31	127.05	2999.84	15.27	-15.61	-18.07	23.88	229.18	0.37	120.88M
	3100.00	0.32	120.88	3099.83	15.58	-15.92	-17.62	23.74	227.90	0.04	125.46M
	3200.00	0.33	125.46	3199.83	15.90	-16.23	-17.14	23.61	226.57	0.03	129.98M
	3300.00	0.33	129.98	3299.83	16.26	-16.58	-16.69	23.52	225.19	0.03	345.96M
	3400.00	1.36	345.96	3399.82	15.29	-15.61	-16.76	22.90	227.02	1.64	4.98M
	3500.00	1.32	4.98	3499.80	12.99	-13.31	-16.94	21.55	231.84	0.44	17.9M
	3600.00	1.05	17.90	3599.77	10.98	-11.30	-16.56	20.05	235.71	0.38	25.49M
	3700.00	1.27	25.49	3699.75	9.12	-9.42	-15.80	18.40	239.19	0.27	25.39M
	3800.00	1.38	25.39	3799.73	7.05	-7.34	-14.81	16.53	243.65	0.11	23.65M
	3900.00	1.39	23.65	3899.70	4.88	-5.14	-13.81	14.73	249.60	0.04	22.38M
	4000.00	1.29	22.38	3999.67	2.74	-2.98	-12.89	13.23	256.97	0.10	25.7M
	4100.00	1.23	25.70	4099.65	0.75	-0.98	-12.00	12.04	265.35	0.09	28.63M
	4200.00	1.16	28.63	4199.63	-1.09	0.88	-11.05	11.08	274.55	0.09	33.68M
	4300.00	0.90	33.68	4299.61	-2.61	2.42	-10.13	10.41	283.45	0.28	26.79M
	4400.00	0.88	26.79	4399.60	-3.94	3.76	-9.35	10.07	291.92	0.11	22.3M
	4500.00	0.88	22.30	4499.59	-5.32	5.16	-8.71	10.12	300.63	0.07	6.87M
	4600.00	0.72	6.87	4599.58	-6.65	6.49	-8.34	10.57	307.88	0.27	359.51M
	4700.00	0.57	359.51	4699.57	-7.77	7.61	-8.27	11.24	312.62	0.17	359.96M
	4800.00	0.63	359.96	4799.56	-8.81	8.66	-8.28	11.98	316.30	0.06	354.98M
	4900.00	0.63	354.98	4899.56	-9.91	9.76	-8.32	12.82	319.53	0.05	317.76M
	5000.00	0.58	317.76	4999.55	-10.84	10.68	-8.71	13.78	320.79	0.39	314.84M
	5100.00	0.65	314.84	5099.55	-11.63	11.45	-9.46	14.85	320.46	0.08	339.6M
	5200.00	0.93	339.60	5199.54	-12.80	12.61	-10.14	16.18	321.20	0.44	342.88M
	5300.00	1.06	342.88	5299.52	-14.46	14.26	-10.70	17.82	323.13	0.14	343.58M
	5400.00	1.12	343.58	5399.50	-16.29	16.08	-11.24	19.62	325.04	0.06	345.81M
	5500.00	1.01	345.81	5499.49	-18.09	17.87	-11.74	21.38	326.71	0.12	342.91M
	5600.00	1.02	342.91	5599.47	-19.80	19.58	-12.21	23.07	328.04	0.05	350.49M
	5700.00	0.83	350.49	5699.46	-21.38	21.14	-12.60	24.61	329.22	0.23	350.57M
	5800.00	0.80	350.57	5799.45	-22.78	22.55	-12.83	25.94	330.36	0.03	355.43M
	5900.00	0.75	355.43	5899.44	-24.13	23.89	-13.00	27.19	331.45	0.08	356.86M
	6000.00	0.72	356.86	5999.43	-25.41	25.17	-13.08	28.36	332.53	0.04	0.85M
	6100.00	0.72	0.85	6099.42	-26.66	26.42	-13.11	29.49	333.61	0.05	4.46M
	6200.00	0.76	4.46	6199.41	-27.95	27.71	-13.05	30.63	334.79	0.06	4.61M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	6300.00	0.82	4.61	6299.40	-29.32	29.09	-12.94	31.83	336.02	0.06	1.42M
	6400.00	0.88	1.42	6399.39	-30.80	30.57	-12.86	33.16	337.18	0.08	1.18M
	6500.00	0.86	1.18	6499.38	-32.32	32.08	-12.83	34.55	338.21	0.02	0.78M
	6600.00	0.70	0.78	6599.37	-33.68	33.45	-12.80	35.81	339.05	0.16	2.35M
	6700.00	0.56	2.35	6699.37	-34.78	34.54	-12.77	36.83	339.71	0.14	12.39M
	6800.00	0.46	12.39	6799.36	-35.66	35.43	-12.67	37.62	340.32	0.13	21.64M
	6900.00	0.47	21.64	6899.36	-36.43	36.20	-12.43	38.27	341.05	0.08	30.08M
	7000.00	0.53	30.08	6999.36	-37.20	36.98	-12.05	38.89	341.95	0.09	46.24M
	7100.00	0.54	46.24	7099.35	-37.92	37.71	-11.48	39.41	343.07	0.15	45.84M
	7200.00	0.54	45.84	7199.35	-38.56	38.36	-10.80	39.85	344.28	0.00	55.45M
	7300.00	0.56	55.45	7299.34	-39.15	38.97	-10.06	40.24	345.53	0.09	53.66M
	7400.00	0.68	53.66	7399.34	-39.76	39.59	-9.18	40.64	346.95	0.12	52.68M
	7500.00	0.73	52.68	7499.33	-40.48	40.33	-8.19	41.16	348.52	0.05	51.03M
	7600.00	0.76	51.03	7599.32	-41.26	41.14	-7.17	41.76	350.11	0.04	45.48M
	7700.00	0.80	45.48	7699.31	-42.15	42.04	-6.16	42.49	351.67	0.09	42.28M
	7800.00	0.80	42.28	7799.30	-43.14	43.05	-5.19	43.36	353.13	0.04	42.75M
	7900.00	0.77	42.75	7899.29	-44.13	44.06	-4.26	44.26	354.47	0.03	47.92M
	8000.00	0.72	47.92	7999.28	-45.03	44.97	-3.34	45.10	355.75	0.08	51.07M
	8100.00	0.73	51.07	8099.28	-45.83	45.79	-2.38	45.86	357.03	0.04	63.51M
	8200.00	0.72	63.51	8199.27	-46.49	46.47	-1.32	46.49	358.37	0.16	74.57M
	8300.00	0.80	74.57	8299.26	-46.93	46.94	-0.09	46.94	359.90	0.17	81.63M
	8400.00	0.86	81.63	8399.25	-47.20	47.24	1.33	47.25	1.61	0.12	88.02M
	8500.00	0.93	88.02	8499.24	-47.31	47.37	2.88	47.46	3.48	0.12	103.94M
	8600.00	1.04	103.94	8599.22	-47.09	47.18	4.58	47.40	5.54	0.29	112.67M
	8700.00	1.02	112.67	8699.21	-46.49	46.62	6.28	47.04	7.67	0.16	116.06M
	8800.00	1.06	116.06	8799.19	-45.71	45.87	7.93	46.55	9.81	0.07	126.03M
	8900.00	1.13	126.03	8899.17	-44.70	44.88	9.56	45.89	12.02	0.20	129.48M
	9000.00	1.20	129.48	8999.15	-43.42	43.64	11.16	45.04	14.35	0.10	155.06M
	9100.00	1.41	155.06	9099.13	-41.61	41.86	12.49	43.68	16.62	0.61	159.52M
Final Gyro Survey	9150.00	1.41	159.52	9149.11	-40.47	40.72	12.97	42.74	17.66	0.22	160.16M
	9206.00	1.58	160.16	9205.09	-39.09	39.35	13.47	41.59	18.89	0.31	168.47M
	9302.00	1.41	168.47	9301.06	-36.68	36.95	14.15	39.57	20.96	0.29	177.57M
	9395.00	1.49	177.57	9394.03	-34.34	34.62	14.43	37.51	22.63	0.26	181.17M
	9489.00	1.49	181.17	9488.00	-31.90	32.18	14.46	35.28	24.20	0.10	173.57M
	9586.00	1.49	173.57	9584.96	-29.38	29.66	14.58	33.05	26.17	0.20	179.94M
	9680.00	1.80	179.94	9678.93	-26.69	26.97	14.71	30.73	28.61	0.38	181.56M
	9775.00	2.02	181.56	9773.87	-23.53	23.81	14.67	27.96	31.64	0.24	182.14M
	9870.00	1.71	182.14	9868.82	-20.44	20.72	14.57	25.33	35.12	0.33	187.85M
	9964.00	1.80	187.85	9962.78	-17.58	17.85	14.32	22.89	38.73	0.21	196.24M
	10058.00	1.80	196.24	10056.73	-14.71	14.97	13.70	20.30	42.47	0.28	185.65M
	10156.00	1.41	185.65	10154.69	-12.05	12.30	13.15	18.01	46.93	0.50	190.75M
	10250.00	1.32	190.75	10248.67	-9.84	10.08	12.84	16.32	51.86	0.16	217.03M
	10345.00	1.41	217.03	10343.64	-7.85	8.07	11.93	14.41	55.92	0.66	223.14M
	10440.00	1.58	223.14	10438.61	-5.99	6.18	10.33	12.04	59.10	0.25	227.75M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
Final Extreme Survey	10534.00	1.32	227.75	10532.58	-4.35	4.51	8.64	9.75	62.44	0.30	229.03M
	10555.00	1.48	229.03	10553.57	-4.01	4.17	8.26	9.25	63.21	0.78	236.39M
	10587.00	1.41	236.39	10585.56	-3.54	3.68	7.62	8.46	64.22	0.62	191.11M
	10650.00	6.18	191.11	10648.41	0.20	-0.08	6.32	6.32	90.71	8.39	196.15M
	10682.00	11.72	196.15	10680.01	4.99	-4.89	5.08	7.06	133.91	17.47	15.54R
	10716.00	16.50	200.78	10712.98	12.77	-12.73	2.41	12.96	169.29	14.43	12.75R
	10746.00	19.25	202.66	10741.53	21.26	-21.28	-1.01	21.30	182.72	9.37	4.2L
	10776.00	22.54	202.03	10769.55	31.07	-31.17	-5.07	31.58	189.24	10.99	38.05L
	10807.00	25.51	196.80	10797.87	42.90	-43.08	-9.23	44.06	192.10	11.78	43.34L
	10840.00	29.07	190.20	10827.19	57.53	-57.78	-12.71	59.16	192.40	14.14	39.55L
	10870.00	33.02	184.42	10852.90	72.82	-73.11	-14.63	74.56	191.32	16.48	32.96L
	10901.00	36.91	180.30	10878.30	90.54	-90.85	-15.33	92.13	189.58	14.67	27.65L
	10933.00	39.31	178.33	10903.48	110.29	-110.59	-15.08	111.62	187.77	8.41	39.64L
	10963.00	41.58	175.54	10926.31	129.73	-130.02	-14.03	130.78	186.16	9.68	31.62L
	10996.00	43.92	173.48	10950.54	152.06	-152.31	-11.88	152.78	184.46	8.26	11.7L
Survey 12-Feb-13	11028.00	47.11	172.58	10972.96	174.77	-174.97	-9.11	175.21	182.98	10.17	3.47L
	11062.00	50.82	172.29	10995.28	200.25	-200.39	-5.73	200.47	181.64	10.93	3.14R
	11095.00	57.95	172.75	11014.49	226.89	-226.97	-2.24	226.98	180.57	21.64	17.16R
	11123.00	63.02	174.50	11028.28	251.14	-251.18	0.45	251.18	179.90	18.91	36.07R
	11155.00	65.65	176.59	11042.14	279.93	-279.93	2.69	279.94	179.45	10.11	18.52R
	11186.00	68.83	177.73	11054.13	308.50	-308.48	4.10	308.51	179.24	10.80	19.44R
	11218.00	72.32	179.02	11064.77	338.67	-338.64	4.95	338.68	179.16	11.55	18.68R
	11249.00	75.27	180.05	11073.42	368.44	-368.40	5.19	368.44	179.19	10.04	15.96R
	11280.00	77.56	180.72	11080.70	398.56	-398.53	4.99	398.56	179.28	7.68	7.28L
	11312.00	80.26	180.37	11086.85	429.94	-429.93	4.69	429.96	179.38	8.51	6.96L
	11343.00	83.52	179.97	11091.23	460.62	-460.62	4.60	460.64	179.43	10.59	8.81L
	11382.00	87.78	179.31	11094.18	499.50	-499.49	4.84	499.52	179.44	11.05	44.99L
	11422.00	88.03	179.06	11095.65	539.47	-539.46	5.41	539.49	179.43	0.88	168.38L
	11454.00	87.69	178.99	11096.84	571.45	-571.44	5.96	571.47	179.40	1.08	159.17R
	11486.00	87.27	179.15	11098.25	603.42	-603.40	6.47	603.44	179.39	1.40	169.03L
Survey 13-Feb-13	11518.00	86.24	178.95	11100.06	635.36	-635.35	7.00	635.38	179.37	3.28	2.91L
	11609.00	86.83	178.92	11105.56	726.20	-726.16	8.69	726.21	179.31	0.65	4.23R
	11708.00	91.16	179.24	11107.30	825.16	-825.11	10.28	825.17	179.29	4.39	149.33L
	11804.00	89.17	178.06	11107.02	921.15	-921.08	12.54	921.16	179.22	2.41	128.3L
	11899.00	88.72	177.49	11108.77	1016.11	-1015.99	16.23	1016.12	179.08	0.76	86.3R
	11995.00	88.82	179.03	11110.83	1112.08	-1111.92	19.14	1112.08	179.01	1.61	90L
	12185.00	88.82	177.71	11114.74	1302.03	-1301.80	24.55	1302.03	178.92	0.69	125L
	12281.00	88.75	177.61	11116.78	1397.98	-1397.70	28.47	1397.99	178.83	0.13	9.23L
	12376.00	89.55	177.48	11118.19	1492.95	-1492.60	32.54	1492.95	178.75	0.85	23.96R
	12470.00	89.82	177.60	11118.70	1586.92	-1586.51	36.57	1586.93	178.68	0.31	127.88R
	12566.00	89.75	177.69	11119.06	1682.89	-1682.43	40.52	1682.92	178.62	0.12	116.57L
	12661.00	89.72	177.63	11119.50	1777.87	-1777.35	44.39	1777.90	178.57	0.07	69.15L
	12765.00	89.80	177.42	11119.94	1881.84	-1881.25	48.88	1881.89	178.51	0.22	112.62L

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	12851.00	89.75	177.30	11120.28	1967.80	-1967.16	52.85	1967.87	178.46	0.15	78.18R
	12945.00	89.84	177.73	11120.61	2061.78	-2061.07	56.92	2061.85	178.42	0.47	99.87R
	13040.00	89.76	178.19	11120.95	2156.76	-2156.01	60.30	2156.85	178.40	0.49	78.06R
	13136.00	89.87	178.71	11121.26	2252.76	-2251.97	62.90	2252.85	178.40	0.55	96.12R
	13231.00	89.84	178.99	11121.50	2347.76	-2346.95	64.81	2347.85	178.42	0.30	107.65R
Survey 14-Feb-13	13326.00	89.77	179.21	11121.82	2442.76	-2441.94	66.30	2442.84	178.44	0.24	62L
	13422.00	90.19	178.42	11121.85	2538.75	-2537.92	68.28	2538.84	178.46	0.93	7.43R
	13517.00	90.42	178.45	11121.35	2633.75	-2632.88	70.88	2633.84	178.46	0.24	106.7R
	13612.00	90.36	178.65	11120.70	2728.75	-2727.85	73.28	2728.83	178.46	0.22	84.09R
	13707.00	90.39	178.94	11120.08	2823.74	-2822.83	75.28	2823.83	178.47	0.31	98.47R
Survey 15-Feb-13	13898.00	90.25	179.88	11119.01	3014.73	-3013.81	77.25	3014.80	178.53	0.50	99.62R
	13993.00	90.15	180.47	11118.68	3109.71	-3108.81	76.96	3109.76	178.58	0.63	64.98L
	14088.00	90.22	180.32	11118.37	3204.68	-3203.81	76.30	3204.71	178.64	0.17	71.56R
	14183.00	90.25	180.41	11117.98	3299.64	-3298.80	75.70	3299.67	178.69	0.10	8.13R
	14276.00	90.39	180.43	11117.46	3392.61	-3391.80	75.02	3392.63	178.73	0.15	169.7L
	14346.00	90.28	180.41	11117.06	3462.59	-3461.80	74.50	3462.60	178.77	0.16	108.43R
	14465.00	90.25	180.50	11116.50	3581.54	-3580.79	73.56	3581.55	178.82	0.08	33.69L
	14560.00	90.28	180.48	11116.07	3676.51	-3675.79	72.74	3676.51	178.87	0.04	127.88R
	14655.00	90.21	180.57	11115.66	3771.47	-3770.78	71.87	3771.47	178.91	0.12	29.74R
	14751.00	90.35	180.65	11115.19	3867.42	-3866.78	70.85	3867.42	178.95	0.17	81.87L
Final Survey	14846.00	90.36	180.58	11114.60	3962.38	-3961.77	69.83	3962.38	178.99	0.07	27.41R
	14941.00	90.63	180.72	11113.78	4057.33	-4056.76	68.75	4057.34	179.03	0.32	166.33L
	15035.00	90.26	180.63	11113.05	4151.29	-4150.75	67.65	4151.30	179.07	0.41	33.69L
	15131.00	90.32	180.59	11112.56	4247.24	-4246.74	66.63	4247.26	179.10	0.08	90R
	15219.00	90.32	180.77	11112.07	4335.20	-4334.73	65.58	4335.23	179.13	0.20	HS
Proj to TD	15289.00	90.32	180.77	11111.68	4405.16	-4404.73	64.64	4405.20	179.16	0.00	

Survey Type: Non-Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	18.000		30.000	30.000	SLB_CNSG+DPIPE-Depth Only	Original Borehole / Cimarex Hanson 26 Federal Com #2H Gyro+MWD 0ft to Update
	18.000	9150.000		30.000	30.000	SLB_CNSG+DPIPE	Original Borehole / Cimarex Hanson 26 Federal Com #2H
	9150.000	10534.000		30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Hanson 26 Federal Com #2H
	10534.000	10587.000		30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Hanson 26 Federal Com #2H

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
		10587.000	10996.000		Act Stns	30.000	30.000	SLB_MWD+DMAG		Original Borehole / Cimarex Hanson 26 Federal Com #2H	
		10996.000	15219.000		Act Stns	30.000	30.000	SLB_MWD-STD		Original Borehole / Cimarex Hanson 26 Federal Com #2H	
		15219.000	15289.000		Act Stns	30.000	30.000	SLB_BLIND+TREND		Original Borehole / Cimarex Hanson 26 Federal Com #2H	