

Results of Directional Survey

DD

API number:	30-025-40469		
OGRID:		Operator:	CHEVRON U S A INC
		Property:	CENTRAL VACUUM UNIT # 285

surface	ULSTR:	N	31	T 17S	R 35E
				1083 FSL	1753 FWL

BH Loc	ULSTR:	K	31	T 17S	R 35E
5160	MD	5056.8	TVD	1343 FSL	1325 FWL

Top Perf/OH	ULSTR:	N	31	T 17S	R 35E
4824	MD	4748.5	TVD	1276 FSL	1440 FWL

Bot Perf/OH	ULSTR:	N	31	T 17S	R 35E
5044	MD	4950.6	TVD	1320 FSL	1365 FWL

	MD	N/S	E/W	VD
	4792	187.00	-301.69	4719.03
TOP PERFS/OH	4824	193.25	-312.52	4748.49
	4837	195.79	-316.92	4760.46
	5017	231.16	-378.44	4925.87
BOT PERFS/OH	5044	236.52	-387.83	4950.61
	5063	240.30	-394.44	4968.02

NEXT TO LAST	5063	240.30	-394.44	4968.02
LAST READING	5160	259.66	-428.43	5056.78
TD	5160	259.66	-428.43	5056.78

Surface Location	1083	FS	1753	FW
Projected BHL	1343	FS	1325	FW
Location of				
Top Perfs/OH	1276	FS	1440	FW
Bottom Perfs/OH	1320	FS	1365	FW

SUMMARY of Subsurface Locations

Surface Location	N-31-17S-35E	1083	FS	1753	FW	Vert. Depth
Top Perfs/OH	N-31-17S-35E	1276	FS	1440	FW	4748.49
Bottom Perfs/OH	N-31-17S-35E	1320	FS	1365	FW	4950.61
Projected TD	K-31-17S-35E	1343	FS	1325	FW	5056.78

HOBBS OCD

JAN 28 2013

RECEIVED

CHEVRON

Vacuum Grayburg San Andres
Lea County, NM
Central Vacuum Unit #285
VH - Job #32K0712893

30-025-40469
9600 N-31-175-35E
10835 1753W
Survey: Gyro

SDI Standard Survey Report

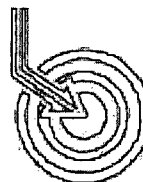
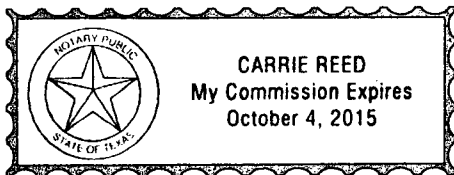
This survey is correct to the best of my knowledge and is supported by actual field data.

[Signature]

Notarized this date 3rd of August, 2012.

[Signature]

Notary Signature
County of Midland
State of Texas



Scientific Drilling

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	CHEVRON	Local Co-ordinate Reference:	Well Central Vacuum Unit #285
Project:	Vacuum Grayburg San Andres	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Lea County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	Central Vacuum Unit #285	North Reference:	True
Wellbore:	VH - Job #32K0712893	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0712893	Database:	EDM-Regulatory

Project	Vacuum Grayburg San Andres		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Lea County, NM		
Site Position:		Northing:	656,116.37 usft
From:	Lat/Long	Easting:	755,139.93 usft
Position Uncertainty:	0.00 usft	Slot Radius:	0"
		Latitude:	32° 48' 3.600 N
		Longitude:	103° 30' 10.800 W
		Grid Convergence:	0.45 °

Well	Central Vacuum Unit #285, Directional (SDI)		
Well Position	+N/-S	0.00 usft	Northing: 651,032.58 usft
	+E/-W	0.00 usft	Easting: 756,409.24 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 47' 13.200 N
		Longitude:	103° 29' 56.400 W
		Ground Level:	0.00 usft

Wellbore	VH - Job #32K0712893				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/18/12	7.46	60.69	48,880

Design	VH - Job #32K0712893			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	124.08

Survey Program	Date 08/12/12				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
91.74	3,169.44	Gyro (VH - Job #32K0712893)	Keeper	Keeper Gyro	

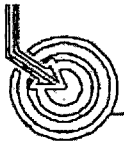
Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91.74	0.06	215.92	91.74	-0.04	-0.03	215.92	0.05
181.74	0.26	223.42	181.74	-0.23	-0.20	221.04	0.30
271.74	0.51	163.53	271.74	-0.76	-0.22	196.40	0.79
361.74	0.56	194.29	361.73	-1.57	-0.22	187.91	1.58
451.74	0.50	156.78	451.73	-2.36	-0.17	184.17	2.36
541.74	0.72	131.20	541.73	-3.09	0.41	172.46	3.12
631.74	1.08	122.21	631.71	-3.91	1.55	158.37	4.21
733.23	1.50	128.28	733.18	-5.25	3.40	147.02	6.25
823.23	1.46	131.29	823.15	-6.73	5.19	142.37	8.50
913.23	1.37	127.12	913.12	-8.14	6.91	139.67	10.68
1,003.23	1.29	123.29	1,003.10	-9.34	8.61	137.33	12.71

Scientific Drilling International, Inc.
SDI Standard Survey Report



Company:	CHEVRON	Local Co-ordinate Reference:	Well Central Vacuum Unit #285
Project:	Vacuum Grayburg San Andres	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Lea County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Well:	Central Vacuum Unit #285	North Reference:	True
Wellbore:	VH - Job #32K0712893	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0712893	Database:	EDM-Regulatory

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,094.90	1.39	126.67	1,094.74	-10.57	10.37	135.56	14.81
1,186.47	1.89	128.76	1,186.27	-12.18	12.44	134.41	17.41
1,276.47	2.05	130.27	1,276.22	-14.15	14.82	133.68	20.49
1,366.47	2.42	135.19	1,366.15	-16.54	17.39	133.57	24.00
1,456.47	2.71	137.95	1,456.06	-19.47	20.15	134.01	28.02
1,546.47	2.35	140.48	1,545.97	-22.47	22.75	134.64	31.98
1,636.47	2.05	145.29	1,635.91	-25.22	24.84	135.43	35.40
1,726.47	1.85	145.62	1,725.86	-27.74	26.58	136.22	38.42
1,816.47	1.34	151.01	1,815.82	-29.86	27.91	136.93	40.87
1,906.59	1.36	149.58	1,905.92	-31.70	28.96	137.59	42.94
1,996.69	1.24	143.86	1,995.99	-33.41	30.08	138.01	44.96
2,086.79	1.02	141.21	2,086.07	-34.83	31.16	138.18	46.73
2,176.88	0.83	135.21	2,176.15	-35.91	32.12	138.19	48.18
2,266.95	0.75	115.46	2,266.21	-36.63	33.11	137.89	49.38
2,357.15	0.58	98.13	2,356.41	-36.95	34.10	137.30	50.28
2,447.31	0.67	67.03	2,446.56	-36.81	35.03	136.42	50.81
2,537.49	0.90	56.98	2,536.73	-36.22	36.11	135.08	51.14
2,627.75	1.40	55.12	2,626.98	-35.20	37.61	133.10	51.51
2,717.97	1.39	58.25	2,717.17	-33.99	39.45	130.75	52.07
2,808.26	1.26	63.14	2,807.44	-32.97	41.26	128.62	52.82
2,898.46	1.07	73.42	2,897.62	-32.28	42.95	126.92	53.73
2,988.78	0.74	76.43	2,987.93	-31.90	44.33	125.74	54.62
3,079.17	0.74	81.47	3,078.31	-31.68	45.47	124.86	55.42
3,169.44	0.78	87.68	3,168.57	-31.57	46.66	124.08	56.34

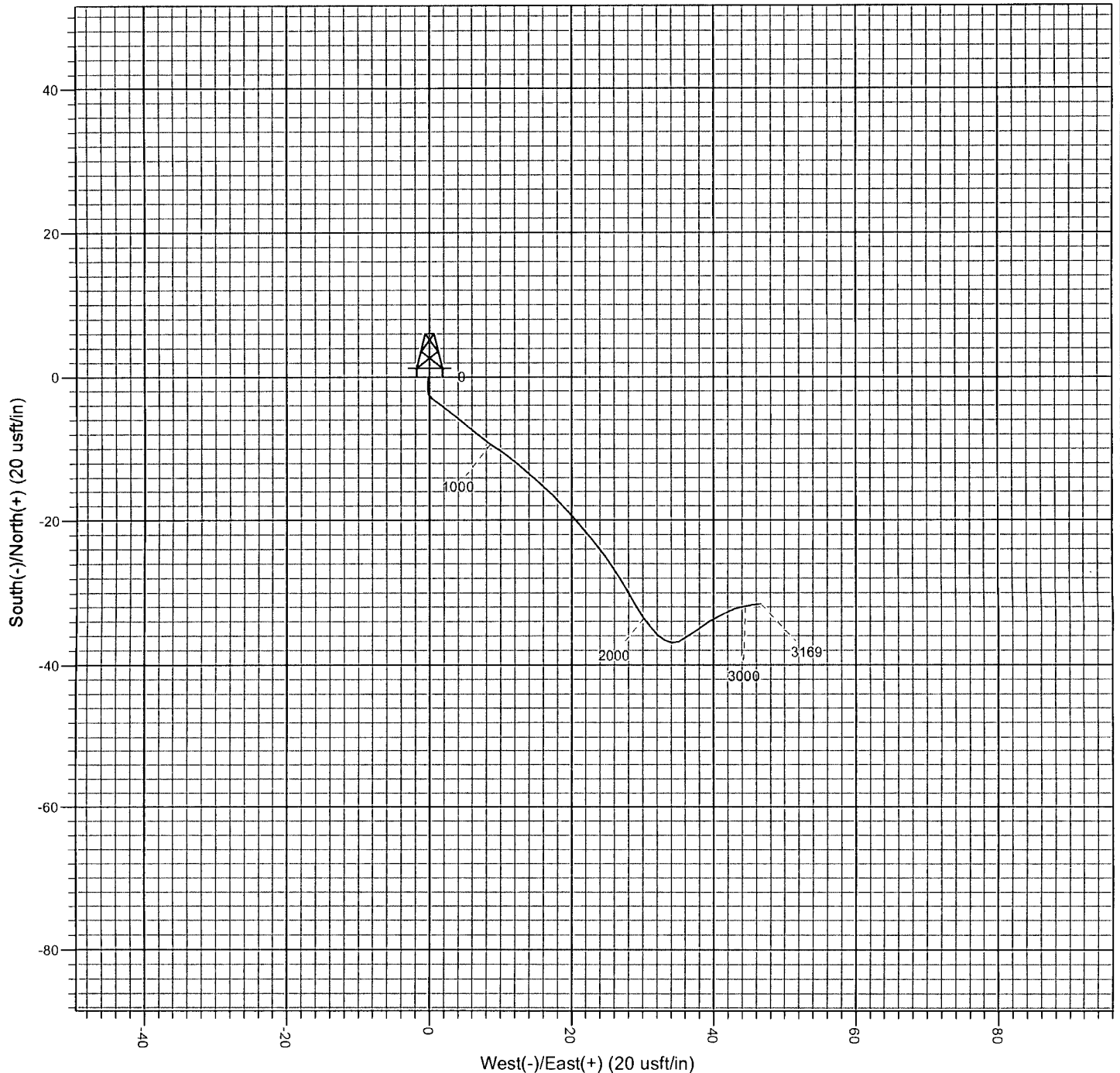


Scientific Drilling

Project: Vacuum Grayburg San Andres
Lea County, NM
Well: Central Vacuum Unit #285
Wellbore: VH - Job #32K0712893
Design: VH - Job #32K0712893

WELL DETAILS: Central Vacuum Unit #285
WELL @ 0.00usft (Original Well Elev)
Ground Level: 0.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	651032.58	756409.24	32° 47' 13.200 N	103° 29' 56.400 W	



PROJECT DETAILS: Vacuum Grayburg San Andres	SITE DETAILS: Lea County, NM
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 32° 48' 3.600 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 103° 30' 10.800 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.00
Zone: New Mexico East 3001	Convergence: 0.45
System Datum: Mean Sea Level	Local North: True

MD	INC	AZI	TVD	VSEC	NS	EW	DL/100'	BLD/100'	TURN
0	0	0	0	0	0	0	0	0	0
91.74	0.06	215.92	91.74	0	-0.04	-0.03	0.07	0.07	0
181.74	0.26	223.42	181.74	0.05	-0.23	-0.2	0.22	0.22	8.33
271.74	0.51	163.53	271.74	-0.21	-0.76	-0.22	0.49	0.28	-66.54
361.74	0.56	194.29	361.73	-0.64	-1.57	-0.22	0.32	0.06	34.18
451.74	0.5	156.78	451.73	-1.1	-2.36	-0.17	0.38	-0.07	-41.68
541.74	0.72	131.2	541.73	-1.98	-3.09	0.41	0.38	0.24	-28.42
631.74	1.08	122.21	631.71	-3.38	-3.91	1.55	0.43	0.4	-9.99
733.23	1.5	128.28	733.18	-5.66	-5.25	3.4	0.43	0.41	5.98
823.23	1.46	131.29	823.15	-7.96	-6.73	5.19	0.1	-0.04	3.34
913.23	1.37	127.12	913.12	-10.16	-8.14	6.91	0.15	-0.1	-4.63
1003.23	1.29	123.29	1003.1	-12.25	-9.34	8.61	0.13	-0.09	-4.26
1094.9	1.39	126.67	1094.74	-14.39	-10.57	10.37	0.14	0.11	3.69
1186.47	1.89	128.76	1186.27	-16.99	-12.18	12.44	0.55	0.55	2.28
1276.47	2.05	130.27	1276.22	-20.06	-14.15	14.82	0.19	0.18	1.68
1366.47	2.42	135.19	1366.15	-23.5	-16.54	17.39	0.46	0.41	5.47
1456.47	2.71	137.95	1456.06	-27.39	-19.47	20.15	0.35	0.32	3.07
1546.47	2.35	140.48	1545.97	-31.18	-22.47	22.75	0.42	-0.4	2.81
1636.47	2.05	145.29	1635.91	-34.41	-25.22	24.84	0.39	-0.33	5.34
1726.47	1.85	145.62	1725.86	-37.21	-27.74	26.58	0.22	-0.22	0.37
1816.47	1.34	151.01	1815.82	-39.46	-29.86	27.91	0.59	-0.57	5.99
1906.59	1.36	149.58	1905.92	-41.33	-31.7	28.96	0.04	0.02	-1.59
1996.69	1.24	143.86	1995.99	-43.18	-33.41	30.08	0.2	-0.13	-6.35
2086.79	1.02	141.21	2086.07	-44.84	-34.83	31.16	0.25	-0.24	-2.94
2176.88	0.83	135.21	2176.15	-46.23	-35.91	32.12	0.24	-0.21	-6.66
2266.95	0.75	115.46	2266.21	-47.45	-36.63	33.11	0.31	-0.09	-21.93
2357.15	0.58	98.13	2356.41	-48.46	-36.95	34.1	0.29	-0.19	-19.21
2447.31	0.67	67.03	2446.56	-49.18	-36.81	35.03	0.38	0.1	-34.49
2537.49	0.9	56.98	2536.73	-49.78	-36.22	36.11	0.3	0.26	-11.14
2627.75	1.4	55.12	2626.98	-50.52	-35.2	37.61	0.56	0.55	-2.06
2717.97	1.39	58.25	2717.17	-51.44	-33.99	39.45	0.09	-0.01	3.47
2808.26	1.26	63.14	2807.44	-52.44	-32.97	41.26	0.19	-0.14	5.42
2898.46	1.07	73.42	2897.62	-53.52	-32.28	42.95	0.31	-0.21	11.4
2988.78	0.74	76.43	2987.93	-54.49	-31.9	44.33	0.37	-0.37	3.33
3079.17	0.74	81.47	3078.31	-55.34	-31.68	45.47	0.07	0	5.58
3169.44	0.78	87.68	3168.57	-56.3	-31.57	46.66	0.1	0.04	6.88
3276	0.84	77.12	3275.12	-57.45	-31.36	48.15	0.15	0.06	-9.91
3304	0.65	48.8	3303.12	-57.64	-31.21	48.47	1.46	-0.68	-101.14
3349	0.98	327.26	3348.11	-57.37	-30.72	48.45	2.43	0.73	-181.2
3394	2.59	322.52	3393.09	-56.07	-29.59	47.63	3.59	3.58	-10.53
3439	3.62	313.87	3438.02	-53.73	-27.8	45.98	2.51	2.29	-19.22
3484	4.89	305.13	3482.9	-50.43	-25.71	43.39	3.16	2.82	-19.42
3529	6	308.16	3527.7	-46.17	-23.15	39.97	2.55	2.47	6.73
3574	6.97	306.23	3572.41	-41.11	-20.09	35.92	2.21	2.16	-4.29
3619	8.08	299.4	3617.02	-35.23	-16.92	30.96	3.16	2.47	-15.18
3664	9.33	298.45	3661.5	-28.43	-13.63	25	2.8	2.78	-2.11

3709	10.23	301.03	3705.85	-20.79	-9.83	18.37	2.22	2	5.73
3754	11.14	300.26	3750.07	-12.45	-5.58	11.19	2.05	2.02	-1.71
3799	12.78	301.56	3794.09	-3.13	-0.79	3.19	3.69	3.64	2.89
3844	15.21	305.05	3837.75	7.74	5.21	-5.88	5.71	5.4	7.76
3889	16.04	304.08	3881.09	19.85	12.08	-15.86	1.93	1.84	-2.16
3934	17.21	303.82	3924.2	32.72	19.27	-26.54	2.61	2.6	-0.58
3979	18.27	303.23	3967.06	46.42	26.84	-37.97	2.39	2.36	-1.31
4024	19.79	303.55	4009.6	61.09	34.92	-50.22	3.39	3.38	0.71
4070	21.25	304.1	4052.68	77.2	43.9	-63.62	3.2	3.17	1.2
4115	22.33	301.65	4094.47	93.9	52.96	-77.65	3.14	2.4	-5.44
4160	22.74	301.57	4136.03	111.15	61.99	-92.34	0.91	0.91	-0.18
4205	22.39	300.69	4177.59	128.41	70.92	-107.12	1.08	-0.78	-1.96
4250	21.34	298.9	4219.35	145.16	79.25	-121.65	2.76	-2.33	-3.98
4295	21.43	299.34	4261.25	161.55	87.24	-135.99	0.41	0.2	0.98
4340	22.6	300.8	4302.97	178.41	95.7	-150.58	2.87	2.6	3.24
4385	23.36	302.92	4344.4	195.97	104.97	-165.5	2.5	1.69	4.71
4431	23.33	303.66	4386.63	214.19	114.98	-180.74	0.64	-0.07	1.61
4476	23.3	301.7	4427.96	232	124.59	-195.73	1.73	-0.07	-4.36
4521	23.53	302.13	4469.25	249.88	134.05	-210.9	0.64	0.51	0.96
4566	23.49	301.94	4510.52	267.83	143.57	-226.12	0.19	-0.09	-0.42
4611	22.39	299.61	4551.96	285.37	152.55	-241.18	3.17	-2.44	-5.18
4656	22.46	299.04	4593.56	302.52	160.95	-256.15	0.51	0.16	-1.27
4701	22.63	299.87	4635.12	319.76	169.44	-271.17	0.8	0.38	1.84
4746	22.77	300	4676.63	337.11	178.1	-286.22	0.33	0.31	0.29
4792	22.87	299.8	4719.03	354.94	187	-301.69	0.28	0.22	-0.43
4837	23.13	300.18	4760.46	372.52	195.79	-316.92	0.67	0.58	0.84
4882	23.02	299.99	4801.85	390.14	204.63	-332.18	0.3	-0.24	-0.42
4927	23.37	300.38	4843.22	407.86	213.54	-347.5	0.85	0.78	0.87
4972	23.19	299.26	4884.55	425.63	222.38	-362.93	1.06	-0.4	-2.49
5017	23.47	299.77	4925.87	443.44	231.16	-378.44	0.77	0.62	1.13
5063	23.78	299.67	4968.02	461.86	240.3	-394.44	0.68	0.67	-0.22
5160	23.78	299.67	5056.78	500.95	259.66	-428.43	0	0	0