

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

April 8, 2019

Chevron USA Inc.

HOBBS OCD
FEB 24 2020
RECEIVED

Re:

29, 26S, 33E, Lea NM
32.02143 103.59440

CLIENT: Chevron USA Inc.
WELL: SD EA 29 32 Fed Com P10 17H
FIELD: Upper Wolfcamp

RIG: Nabors 1206
COUNTY: Lea
API NO: 30-025-44485
JOB NO: 19MLD2238

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
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>
Chuck Norwood FS	SD EA 29 32 Fed Com P10 17H Original Hole	879.00 Ft to 19739.00 Ft	February 3, 2019 to March 21, 2019	TelePacer SlimPulse

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

Dana Lasher
Field Service Manager

Schlumberger-Private

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
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Schlumberger

Well Reference:
29, 26S, 33E, Lea NM
32.02143 103.59440

I, Chuck Norwood certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of February 03, 2019 through March 21, 2019, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 879.00 feet to a depth of 19739.00 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 Chevron USA Inc. for the SD EA 29 32 Fed Com P10 17H Well (Original Hole) API No. 30-025-44485 in New Mexico; 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
Chuck Norwood
FS



Subscribed and Sworn to before me this 8th day of April (month) 2019 (yr)

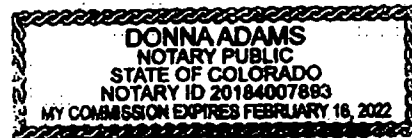
My Commission expires:

2-16-2022

Donna Adams
Notary Public

(signature)

Adams County Colorado
(County State)



Chevron SD EA 29 32 Fed Com P10 17H MWD to 19780ft Survey Geodetic Report (Def Survey)



Report Date: March 21, 2019 - 05:12 PM
 Client: Chevron
 Field: NM Lea County (NAD 27)
 Structure / Slot: Chevron SD EA 29 32 Fed Com P10 Pad / 17H
 Well: SD EA 29 32 Fed Com P10 17H
 Borehole: SD EA 29 32 Fed Com P10 17H
 UWI / API#: Unknown / Unknown
 Survey Name: Chevron SD EA 29 32 Fed Com P10 17H MWD to 19780ft
 Survey Date: March 21, 2019
 Tort / AHD / DDI / ERD Ratio: 270.383' / 8422.228 ft / 6.562 / 0.681
 Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 1' 16.70527", W 103° 35' 38.16990"
 Location Grid N/E Y/X: N 372262.000 RUS, E 729159.000 RUS
 CRS Grid Convergence Angle: 0.3921°
 Grid Scale Factor: 0.99996924
 Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 179.530° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB = 31.5ft
 TVD Reference Elevation: 3267.500 ft above
 Seabed / Ground Elevation: 3236.000 ft above
 Magnetic Declination: 6.688°
 Total Gravity Field Strength: 998.4327mgm (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47693.126 nT
 Magnetic Dip Angle: 59.634°
 Declination Date: March 21, 2019
 Magnetic Declination Model: HDGM 2019
 North Reference: Grid North
 Grid Convergence Used: 0.3921°
 Total Corr Mag North -> Grid North: 6.2964°
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	372262.00	729159.00	N 32 1 16.71	W 103 35 38.17
Adjusted KB	24.50	0.00	0.00	24.50	0.00	0.00	0.00	0.00	372262.00	729159.00	N 32 1 16.71	W 103 35 38.17
First 3rd Party Survey	156.50	0.40	257.61	156.50	0.10	-0.10	-0.45	0.30	372261.90	729158.55	N 32 1 16.70	W 103 35 38.18
	243.50	1.00	166.82	243.49	0.90	-0.90	-0.57	1.24	372261.10	729158.43	N 32 1 16.70	W 103 35 38.18
	333.50	0.80	176.31	333.48	2.29	-2.29	-0.35	0.28	372259.71	729158.65	N 32 1 16.68	W 103 35 38.17
	435.50	0.50	94.22	435.48	3.04	-3.04	0.14	0.87	372258.96	729159.14	N 32 1 16.68	W 103 35 38.17
	520.50	1.20	140.36	520.47	3.76	-3.75	1.07	1.09	372258.25	729160.07	N 32 1 16.67	W 103 35 38.16
	604.50	1.10	169.98	604.45	5.24	-5.22	1.77	0.71	372256.78	729160.77	N 32 1 16.65	W 103 35 38.15
	689.50	0.60	106.00	689.44	6.17	-6.15	2.34	1.17	372255.85	729161.34	N 32 1 16.64	W 103 35 38.14
	773.50	0.30	86.10	773.44	6.28	-6.25	2.99	0.40	372255.75	729161.99	N 32 1 16.64	W 103 35 38.14
	832.50	0.80	160.70	832.44	6.66	-6.63	3.28	1.32	372255.37	729162.28	N 32 1 16.64	W 103 35 38.13
	879.00	0.64	179.06	878.94	7.23	-7.20	3.39	0.60	372254.80	729162.39	N 32 1 16.63	W 103 35 38.13
Last 3rd Party Survey	975.00	0.57	172.00	974.93	8.24	-8.21	3.46	0.11	372253.79	729162.46	N 32 1 16.62	W 103 35 38.13
	1069.00	0.79	231.91	1068.92	9.10	-9.07	3.02	0.75	372252.93	729162.02	N 32 1 16.62	W 103 35 38.14
	1165.00	2.15	269.26	1164.89	9.51	-9.50	0.70	1.66	372252.50	729159.70	N 32 1 16.61	W 103 35 38.16
	1259.00	3.36	286.88	1258.78	8.69	-8.73	-3.70	1.56	372253.28	729155.30	N 32 1 16.62	W 103 35 38.21
	1353.00	5.13	294.43	1352.52	6.10	-6.19	-10.16	1.97	372255.81	729148.84	N 32 1 16.64	W 103 35 38.29
	1448.00	5.40	296.17	1447.12	2.31	-2.46	-18.04	0.33	372259.54	729140.96	N 32 1 16.68	W 103 35 38.38
	1544.00	6.32	306.49	1542.62	-2.89	2.68	-26.35	1.45	372264.68	729132.65	N 32 1 16.73	W 103 35 38.48
	1639.00	7.84	305.71	1636.90	-9.86	9.57	-35.81	1.60	372271.57	729123.19	N 32 1 16.80	W 103 35 38.59
	1734.00	9.11	298.48	1730.86	-17.33	16.94	-47.68	1.74	372278.94	729111.32	N 32 1 16.88	W 103 35 38.72
	1829.00	10.28	293.49	1824.50	-24.41	23.90	-62.07	1.52	372285.90	729096.93	N 32 1 16.95	W 103 35 38.89
First SLB MWD Survey	1924.00	11.22	283.85	1917.84	-30.14	29.49	-78.82	2.13	372291.49	729080.18	N 32 1 17.00	W 103 35 39.08
	2019.00	11.77	277.76	2010.94	-33.81	33.01	-87.39	1.40	372295.01	729061.61	N 32 1 17.04	W 103 35 39.30
	2114.00	12.25	277.95	2103.86	-36.67	35.72	-116.98	0.51	372297.72	729042.03	N 32 1 17.07	W 103 35 39.53
	2209.00	12.39	278.13	2198.67	-39.67	38.55	-137.05	0.15	372300.55	729021.96	N 32 1 17.10	W 103 35 39.76
	2303.00	12.57	278.83	2288.45	-42.84	41.55	-157.14	0.25	372303.55	729001.87	N 32 1 17.13	W 103 35 39.99
	2398.00	12.94	274.12	2381.11	-45.36	43.90	-177.96	1.16	372305.90	728981.04	N 32 1 17.15	W 103 35 40.23
	2493.00	13.09	273.76	2473.67	-47.00	45.37	-199.31	0.18	372307.37	728959.70	N 32 1 17.17	W 103 35 40.48
	2588.00	12.47	278.13	2568.32	-49.33	47.52	-220.20	1.21	372309.52	728938.81	N 32 1 17.19	W 103 35 40.72
	2683.00	12.59	278.43	2659.05	-52.47	50.49	-240.59	0.14	372312.49	728918.42	N 32 1 17.22	W 103 35 40.96
	2778.00	12.25	274.73	2751.83	-54.98	52.84	-260.88	0.91	372314.84	728898.13	N 32 1 17.25	W 103 35 41.20
2872.00	12.58	271.76	2843.63	-56.28	53.98	-281.05	0.76	372315.98	728877.96	N 32 1 17.26	W 103 35 41.43	
2967.00	12.55	271.43	2936.36	-57.03	54.55	-301.71	0.08	372316.55	728857.30	N 32 1 17.27	W 103 35 41.67	
3062.00	13.00	271.89	3029.01	-57.81	55.16	-322.71	0.49	372317.16	728836.31	N 32 1 17.27	W 103 35 41.91	
3156.00	11.08	269.83	3120.94	-58.29	55.49	-342.31	2.09	372317.48	728816.70	N 32 1 17.28	W 103 35 42.14	
3251.00	11.66	271.17	3214.07	-58.61	55.66	-361.03	0.67	372317.65	728797.98	N 32 1 17.28	W 103 35 42.36	
3346.00	11.59	272.00	3307.12	-59.30	56.18	-380.17	0.19	372318.18	728778.84	N 32 1 17.29	W 103 35 42.58	
3441.00	10.84	273.17	3400.31	-60.28	57.01	-398.63	0.82	372319.01	728760.39	N 32 1 17.30	W 103 35 42.80	
3536.00	9.80	273.24	3493.77	-61.37	57.96	-415.62	1.09	372319.96	728743.40	N 32 1 17.31	W 103 35 42.99	
3631.00	9.50	277.04	3587.43	-62.92	59.38	-431.47	0.74	372321.38	728727.54	N 32 1 17.32	W 103 35 43.18	
3726.00	10.04	279.76	3681.05	-65.41	61.74	-447.41	0.75	372323.74	728711.60	N 32 1 17.35	W 103 35 43.36	
3820.00	10.81	279.24	3773.50	-68.35	64.55	-464.18	0.83	372326.55	728694.83	N 32 1 17.38	W 103 35 43.58	
3915.00	9.88	274.77	3868.95	-70.60	66.68	-481.10	1.29	372328.68	728677.91	N 32 1 17.40	W 103 35 43.75	
4009.00	8.52	269.54	3959.61	-71.34	67.27	-496.91	1.01	372329.26	728662.10	N 32 1 17.40	W 103 35 43.94	
4104.00	9.04	268.06	4053.37	-71.15	66.95	-512.23	0.56	372328.95	728646.79	N 32 1 17.40	W 103 35 44.11	
4199.00	8.04	267.61	4147.31	-70.74	68.42	-526.33	1.05	372328.42	728632.69	N 32 1 17.40	W 103 35 44.28	
4294.00	6.77	272.09	4241.52	-70.76	68.35	-538.56	1.47	372328.35	728620.46	N 32 1 17.40	W 103 35 44.42	
4388.00	6.06	272.62	4334.93	-71.28	68.78	-549.05	0.76	372328.77	728609.96	N 32 1 17.40	W 103 35 44.54	
4483.00	5.41	269.94	4429.45	-71.58	67.00	-558.54	0.74	372329.00	728600.48	N 32 1 17.41	W 103 35 44.65	
4578.00	4.34	264.03	4524.11	-71.27	66.62	-566.60	1.24	372328.62	728592.42	N 32 1 17.40	W 103 35 44.75	
4673.00	3.37	251.49	4618.89	-70.06	65.36	-572.82	1.35	372327.36	728586.20	N 32 1 17.39	W 103 35 44.82	
4768.00	2.87	239.59	4713.75	-68.01	63.27	-577.52	0.86	372325.27	728581.50	N 32 1 17.37	W 103 35 44.87	
4863.00	1.84	236.89	4808.67	-66.00	61.23	-580.85	1.09	372323.23	728578.17	N 32 1 17.35	W 103 35 44.91	
4957.00	1.17	266.46	4902.64	-65.13	60.35	-583.07	1.07	372322.35	728575.95	N 32 1 17.34	W 103 35 44.94	
5052.00	0.83	336.55	4997.63	-65.71	60.92	-584.31	1.24	372322.92	728574.71	N 32 1 17.35	W 103 35 44.95	
5146.00	1.06	357.75	5091.62	-67.21	62.42	-584.62	0.44	372324.41	728574.40	N 32 1 17.36	W 103 35 44.95	
5242.00	0.56	353.84	5187.61	-68.56	63.77	-584.70	0.52	372325.77	728574.32	N 32 1 17.38	W 103 35 44.96	
5336.00	0.41	316.55	5281.60	-69.27	64.47	-584.98	0.36	372326.47	728574.04	N 32 1 17.38	W 103 35 44.96	
5431.00	0.50	68.78	5376.60	-69.66	64.87	-584.83	0.80	372326.87	728574.19	N 32 1 17.39	W 103 35 44.96	
5526.00	0.47	77.83	5471.60	-69.89	65.10	-584.06	0.09	372327.10	728574.96	N 32 1 17.39	W 103 35 44.95	
5620.00	0.82	47.61	5565.59	-70.42	65.63	-583.19	0.51	372327.63	728575.83	N 32 1 17.39	W 103 35 44.94	
5715.00	1.45	44.91	5660.57	-71.71	66.94	-581.84	0.67	372328.94	728577.18	N 32 1 17.41	W 103 35 44.92	
5810.00	1.73	50.21	5755.54	-73.47	68.71	-579.89	0.33	372330.71	728579.13	N 32 1 17.42	W 103 35 44.90	
5904.00	1.59	51.98	5849.50	-75.16	70.42	-577.77	0.16	372332.42	728581.25	N 32 1 17.44	W 103 35 44.87	
5999.00	1.70	48.04	5944.46	-78.90	72.18	-575.68	0.17	372334.18	728583.34	N 32 1 17.46	W 103 35 44.85	
6094.00	1.25	25.12	6039.43	-78.77	74.06	-574.19	0.77	372336.06	728584.82	N 32 1 17.48	W 103 35 44.83	
6189.00	0.78	13.19	6134.41	-80.33	75.63	-573.61	0.54	372337.62	728585.41	N 32 1 17.49	W 103 35 44.83	
6285.00	0.51	11.17	6230.41	-81.38	76.68	-573.38	0.28	372338.68	728585.64	N 32 1 17.50	W 103 35 44.82	
6379.00	0.89	272.20	6324.40	-81.83	77.12	-574.02	1.16	372339.12	728584.99	N 32 1 17.51	W 103 35 44.83	
6474.00	1.50	277.21	6419.38	-82.03	77.30	-576.00	0.65	372339.30	728583.02	N 32 1 17.51	W 103 35 44.85	
6569.00	1.48	257.27	6514.35	-81.93	77.19	-578.43	0.54	372339.19	728580.59	N 32 1 17.51	W 103 35 44.88	
6663.00	1.64	249.49	6608.32	-81.21	76.45	-580.87	0.28	372338.45	728578.15	N 32 1 17.50	W 103 35 44.91	
6758.00	1.04	213.32	6703.29	-80.03	75.25	-582.62	1.06	372337.25	728576.40	N 32 1 17.49	W 103 35 44.93	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S)	Longitude (E/W)
	6852.00	1.12	198.28	6797.27	-78.46	73.67	-583.39	0.29	372335.67	728575.63	N 32	1 17.47 W 103 35 44.94
	6947.00	0.89	218.29	6892.26	-77.01	72.22	-584.15	0.42	372334.22	728574.87	N 32	1 17.48 W 103 35 44.95
	7042.00	0.96	218.05	6987.25	-75.81	71.01	-585.10	0.07	372333.01	728573.92	N 32	1 17.45 W 103 35 44.96
	7137.00	0.96	224.67	7082.23	-74.63	69.82	-586.15	0.12	372331.82	728572.87	N 32	1 17.44 W 103 35 44.97
	7233.00	0.68	247.50	7178.22	-73.85	69.03	-587.24	0.44	372331.03	728571.78	N 32	1 17.43 W 103 35 44.98
	7328.00	0.20	241.44	7273.22	-73.56	68.74	-587.91	0.51	372330.73	728571.11	N 32	1 17.43 W 103 35 44.99
	7422.00	0.62	251.31	7367.22	-73.32	68.49	-588.53	0.45	372330.49	728570.49	N 32	1 17.42 W 103 35 45.00
	7517.00	0.59	231.26	7462.21	-72.86	68.02	-589.40	0.22	372330.02	728569.62	N 32	1 17.42 W 103 35 45.01
	7612.00	0.84	249.78	7557.21	-72.37	67.53	-590.28	0.21	372329.53	728568.74	N 32	1 17.41 W 103 35 45.02
	7708.00	0.41	201.46	7651.20	-71.88	67.04	-590.90	0.51	372329.04	728567.82	N 32	1 17.41 W 103 35 45.03
	7801.00	0.40	232.57	7746.20	-71.37	66.52	-591.28	0.23	372328.52	728567.73	N 32	1 17.40 W 103 35 45.03
	7896.00	0.70	187.16	7841.20	-70.60	65.74	-591.62	0.53	372327.74	728567.40	N 32	1 17.40 W 103 35 45.04
	7991.00	0.36	181.54	7936.19	-69.72	64.87	-591.70	0.36	372326.87	728567.32	N 32	1 17.39 W 103 35 45.04
	8086.00	0.84	205.05	8031.19	-68.79	63.94	-592.00	0.56	372325.94	728567.02	N 32	1 17.38 W 103 35 45.04
	8180.00	1.06	204.29	8125.18	-67.38	62.52	-592.65	0.23	372324.52	728566.37	N 32	1 17.36 W 103 35 45.05
	8274.00	0.90	185.01	8219.16	-65.86	61.00	-593.08	0.39	372322.99	728565.94	N 32	1 17.35 W 103 35 45.05
	8369.00	1.17	198.27	8314.15	-64.20	59.33	-593.44	0.38	372321.33	728565.58	N 32	1 17.33 W 103 35 45.06
	8464.00	1.15	194.80	8409.13	-62.36	57.49	-593.99	0.08	372319.49	728565.03	N 32	1 17.31 W 103 35 45.06
	8559.00	1.49	198.25	8504.10	-60.27	55.39	-594.62	0.37	372317.39	728564.40	N 32	1 17.29 W 103 35 45.07
	8659.00	1.82	193.87	8604.06	-57.50	52.62	-595.41	0.35	372314.62	728563.61	N 32	1 17.27 W 103 35 45.08
	8754.00	1.61	196.79	8699.02	-54.76	49.88	-596.16	0.24	372311.87	728562.86	N 32	1 17.24 W 103 35 45.09
	8848.00	1.83	203.89	8792.97	-52.14	47.24	-597.15	0.33	372309.24	728561.87	N 32	1 17.21 W 103 35 45.10
	8943.00	1.89	202.21	8887.92	-49.31	44.40	-598.35	0.09	372306.40	728560.67	N 32	1 17.19 W 103 35 45.12
	9038.00	1.01	172.13	8982.89	-47.03	42.12	-598.83	1.19	372304.12	728560.19	N 32	1 17.16 W 103 35 45.12
	9133.00	0.75	140.94	9077.88	-45.72	40.81	-598.32	0.56	372302.81	728560.70	N 32	1 17.15 W 103 35 45.12
	9228.00	0.51	191.04	9172.88	-44.82	39.91	-598.01	0.61	372301.91	728561.01	N 32	1 17.14 W 103 35 45.11
	9322.00	0.35	262.80	9268.88	-44.37	39.47	-598.38	0.55	372301.46	728560.84	N 32	1 17.14 W 103 35 45.12
	9415.00	0.70	295.30	9359.87	-44.59	39.67	-599.17	0.48	372301.67	728559.85	N 32	1 17.14 W 103 35 45.13
	9510.00	0.75	278.68	9454.87	-44.94	40.01	-600.31	0.23	372302.01	728559.71	N 32	1 17.14 W 103 35 45.14
	9604.00	1.62	189.83	9548.85	-43.73	38.80	-601.15	1.88	372300.80	728557.87	N 32	1 17.13 W 103 35 45.15
	9699.00	2.26	195.43	9643.79	-40.61	35.67	-601.88	0.70	372297.67	728557.14	N 32	1 17.10 W 103 35 45.16
	9793.00	1.95	191.83	9737.73	-37.26	32.32	-602.70	0.36	372294.32	728556.32	N 32	1 17.07 W 103 35 45.17
	9891.00	1.75	192.09	9835.68	-34.17	29.22	-603.35	0.20	372291.22	728555.67	N 32	1 17.04 W 103 35 45.18
	9986.00	1.26	200.97	9930.65	-31.78	26.83	-604.03	0.57	372288.83	728554.99	N 32	1 17.01 W 103 35 45.18
	10081.00	0.75	258.76	10025.83	-30.69	25.73	-605.01	1.13	372287.73	728554.01	N 32	1 17.00 W 103 35 45.19
	10176.00	0.99	270.82	10120.62	-30.60	25.62	-606.44	0.32	372287.62	728552.58	N 32	1 17.00 W 103 35 45.21
	10271.00	0.47	38.54	10215.62	-30.92	25.94	-607.02	1.40	372287.94	728552.00	N 32	1 17.00 W 103 35 45.22
	10365.00	0.48	41.22	10309.62	-31.51	26.54	-606.52	0.03	372288.54	728552.50	N 32	1 17.01 W 103 35 45.21
	10460.00	0.64	354.72	10404.61	-32.34	27.36	-606.31	0.49	372289.36	728552.71	N 32	1 17.02 W 103 35 45.21
	10555.00	0.83	336.86	10499.60	-33.50	28.53	-606.63	0.31	372290.52	728552.39	N 32	1 17.03 W 103 35 45.21
	10650.00	0.52	329.52	10594.60	-34.51	29.53	-607.12	0.34	372291.53	728551.90	N 32	1 17.04 W 103 35 45.22
	10745.00	0.39	320.01	10689.59	-35.13	30.15	-607.54	0.16	372292.15	728551.48	N 32	1 17.04 W 103 35 45.22
	10839.00	0.35	291.93	10783.59	-35.49	30.50	-608.01	0.20	372292.50	728551.00	N 32	1 17.05 W 103 35 45.23
	10934.00	0.25	253.72	10878.59	-35.54	30.55	-608.48	0.23	372292.55	728550.54	N 32	1 17.05 W 103 35 45.23
	11029.00	0.53	187.01	10973.59	-35.05	30.06	-608.74	0.51	372292.06	728550.28	N 32	1 17.04 W 103 35 45.24
	11124.00	0.08	209.46	11068.59	-34.56	29.56	-608.82	0.48	372291.56	728550.20	N 32	1 17.04 W 103 35 45.24
	11219.00	0.20	242.36	11163.59	-34.42	29.43	-609.00	0.15	372291.43	728550.02	N 32	1 17.04 W 103 35 45.24
	11314.00	0.00	8.31	11258.59	-34.35	29.35	-609.15	0.21	372291.35	728549.87	N 32	1 17.04 W 103 35 45.24
	11409.00	0.28	265.59	11353.59	-34.33	29.33	-609.38	0.29	372291.33	728549.64	N 32	1 17.04 W 103 35 45.25
	11503.00	0.40	238.37	11447.59	-34.15	29.14	-609.89	0.21	372291.14	728549.13	N 32	1 17.03 W 103 35 45.25
	11598.00	0.55	262.66	11498.58	-34.03	29.02	-610.28	0.49	372291.02	728548.74	N 32	1 17.03 W 103 35 45.26
	11694.00	0.56	281.03	11598.58	-34.07	29.05	-611.24	0.18	372291.05	728547.78	N 32	1 17.03 W 103 35 45.27
	11789.00	0.42	309.27	11698.58	-34.16	29.14	-611.45	0.98	372291.14	728547.57	N 32	1 17.04 W 103 35 45.27
	11884.00	7.18	168.88	11791.34	-28.54	23.53	-610.58	7.90	372285.53	728548.44	N 32	1 16.98 W 103 35 45.26
	11979.00	13.54	167.38	11886.58	-20.62	15.62	-608.88	14.14	372277.62	728550.14	N 32	1 16.90 W 103 35 45.24
	12074.00	17.42	163.07	11981.80	-7.97	3.00	-605.49	8.25	372265.00	728553.53	N 32	1 16.78 W 103 35 45.20
	12169.00	21.53	161.17	12077.10	6.97	-11.90	-600.66	8.85	372250.10	728558.36	N 32	1 16.63 W 103 35 45.15
	12264.00	25.03	156.69	12172.07	24.32	-29.20	-593.93	8.34	372232.80	728565.08	N 32	1 16.46 W 103 35 45.07
	12359.00	29.73	154.15	12267.00	44.03	-48.83	-584.91	10.30	372213.17	728574.11	N 32	1 16.26 W 103 35 44.97
	12454.00	33.94	157.48	12362.00	67.70	-72.41	-574.37	9.31	372189.59	728584.65	N 32	1 16.03 W 103 35 44.85
	12549.00	37.75	163.84	12457.00	92.62	-97.26	-565.72	11.83	372164.74	728593.30	N 32	1 15.78 W 103 35 44.75
	12644.00	39.31	172.59	12552.00	122.49	-127.09	-559.54	11.56	372134.92	728599.48	N 32	1 15.49 W 103 35 44.68
	12739.00	38.98	176.67	12647.00	152.04	-156.61	-556.76	5.52	372105.39	728602.26	N 32	1 15.19 W 103 35 44.65
	12834.00	44.27	175.27	12742.00	183.85	-188.40	-554.50	11.19	372073.60	728604.52	N 32	1 14.88 W 103 35 44.63
	12929.00	48.43	173.63	12837.00	218.43	-222.96	-551.12	9.01	372039.05	728607.89	N 32	1 14.54 W 103 35 44.59
	13024.00	55.24	173.06	12932.00	255.15	-259.64	-546.84	14.52	372007.37	728612.18	N 32	1 14.17 W 103 35 44.54
	13119.00	60.87	177.98	13027.00	294.90	-299.37	-543.78	14.91	371967.64	728615.24	N 32	1 13.78 W 103 35 44.51
	13214.00	64.25	182.56	13122.00	337.47	-341.95	-544.00	11.01	371920.06	728615.02	N 32	1 13.36 W 103 35 44.52
	13309.00	66.93	186.17	13217.00	380.11	-384.61	-547.27	9.02	371877.41	728611.75	N 32	1 12.94 W 103 35 44.56
	13404.00	72.46	187.97	13312.00	424.71	-429.26	-552.82	12.05	371832.75	728606.19	N 32	1 12.49 W 103 35 44.62
	13499.00	77.12	187.95	13407.00	469.56	-474.17	-559.10	9.91	371787.85	728599.92	N 32	1 12.05 W 103 35 44.70
	13594.00	77.03	187.17	13502.00	514.92	-519.58	-565.13	1.63	371742.44	728593.89	N 32	1 11.60 W 103 35 44.77
	13689.00	79.80	185.98	13597.00	560.61	-565.31	-570.40	6.39	371696.71	728588.62	N 32	1 11.15 W 103 35 44.84
	13784.00	80.50	183.73	13692.00	607.70	-612.43	-574.40	4.84	371649.59	728584.62	N 32	1 10.68 W 103 35 44.89
	13879.00	81.30	181.28	13787.00	654.04	-658.79	-578.43	5.42	371603.23	728582.59	N 32	1 10.23 W 103 35 44.92
	13974.00	85.14	179.58	13882.00	701.69	-706.44	-576.78	8.74	371555.58	728582.24	N 32	1 9.75 W 103 35 44.92
	14069.00	85.01	179.05	13977.00	746.52	-751.27	-576.25	1.21	371510.75	728582.77	N 32	1 9.31 W 103 35 44.92
	14164.00	87.25	179.96	14072.00	796.40	-801.15	-575.82	4.83	371460.87	728583.20	N 32	1 8.

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	15125.00	89.83	181.86	12350.27	3004.69	-3009.58	-583.85	0.69	369252.52	728575.17	N 32 0 46.96	W 103 35 45.19
	15219.00	89.59	178.33	12350.75	3098.67	-3103.56	-584.01	3.76	369158.54	728575.01	N 32 0 46.03	W 103 35 45.20
	15314.00	90.00	178.21	12351.09	3193.64	-3198.52	-581.14	0.45	369063.59	728577.88	N 32 0 45.09	W 103 35 45.17
	15408.00	89.90	177.14	12351.17	3287.59	-3292.44	-577.33	1.14	368969.67	728581.69	N 32 0 44.16	W 103 35 45.14
	15503.00	89.31	176.08	12351.83	3382.47	-3387.27	-571.71	1.28	368874.84	728587.31	N 32 0 43.22	W 103 35 45.08
	15596.00	89.35	177.34	12352.92	3475.34	-3480.11	-566.37	1.36	368782.01	728592.64	N 32 0 42.31	W 103 35 45.02
	15692.00	90.07	179.60	12353.40	3571.32	-3576.07	-563.81	2.47	368686.05	728595.21	N 32 0 41.36	W 103 35 45.00
	15787.00	89.69	178.98	12353.60	3666.32	-3671.06	-562.63	0.77	368591.06	728596.38	N 32 0 40.42	W 103 35 45.00
	15882.00	89.66	179.56	12354.14	3761.32	-3766.05	-561.42	0.61	368496.08	728597.60	N 32 0 39.48	W 103 35 44.99
	15977.00	89.93	180.17	12354.48	3856.31	-3861.05	-561.20	0.70	368401.08	728597.82	N 32 0 38.54	W 103 35 44.99
	16072.00	90.58	180.18	12354.06	3951.31	-3956.04	-561.49	0.68	368306.09	728597.53	N 32 0 37.60	W 103 35 45.00
	16167.00	90.48	181.49	12353.18	4046.27	-4051.03	-562.87	1.38	368211.10	728596.14	N 32 0 36.66	W 103 35 45.03
	16261.00	90.17	180.73	12352.64	4140.24	-4145.01	-564.69	0.87	368117.13	728594.32	N 32 0 35.73	W 103 35 45.06
	16356.00	90.41	179.94	12352.16	4235.23	-4240.00	-565.25	0.87	368022.13	728593.77	N 32 0 34.79	W 103 35 45.07
	16451.00	89.90	179.31	12351.91	4330.22	-4335.00	-564.63	0.85	367927.14	728594.39	N 32 0 33.85	W 103 35 45.07
	16546.00	89.52	178.23	12352.39	4425.21	-4429.98	-562.59	1.21	367832.17	728596.43	N 32 0 32.91	W 103 35 45.06
	16640.00	89.76	177.64	12352.98	4519.17	-4523.91	-559.20	0.68	367738.23	728599.82	N 32 0 31.98	W 103 35 45.02
	16735.00	90.72	178.01	12352.58	4614.13	-4618.84	-555.60	1.08	367643.31	728603.42	N 32 0 31.04	W 103 35 44.99
	16830.00	91.38	179.22	12350.84	4709.10	-4713.80	-553.30	1.45	367548.36	728605.72	N 32 0 30.10	W 103 35 44.97
	16926.00	89.66	179.72	12349.97	4805.09	-4809.78	-552.41	1.87	367452.37	728606.60	N 32 0 29.15	W 103 35 44.97
	17021.00	89.79	180.43	12350.42	4900.09	-4904.78	-552.54	0.78	367357.38	728606.48	N 32 0 28.21	W 103 35 44.98
	17115.00	89.59	180.28	12350.93	4994.07	-4998.78	-553.12	0.27	367263.38	728605.90	N 32 0 27.28	W 103 35 44.99
	17211.00	89.31	182.25	12351.85	5090.02	-5094.75	-555.24	2.07	367167.42	728603.78	N 32 0 26.33	W 103 35 45.02
	17306.00	89.76	180.46	12352.62	5184.97	-5189.71	-557.49	1.94	367072.46	728601.53	N 32 0 25.39	W 103 35 45.06
	17401.00	88.66	181.06	12353.93	5279.93	-5284.69	-558.75	1.32	366977.48	728600.27	N 32 0 24.45	W 103 35 45.08
	17496.00	88.90	180.59	12355.96	5374.89	-5379.66	-560.11	0.56	366882.51	728598.91	N 32 0 23.51	W 103 35 45.10
	17591.00	89.24	180.69	12357.50	5469.86	-5474.64	-561.17	0.37	366787.54	728597.84	N 32 0 22.57	W 103 35 45.12
	17686.00	89.93	179.27	12358.18	5563.85	-5568.64	-561.14	1.68	366693.54	728597.88	N 32 0 21.64	W 103 35 45.13
	17780.00	89.59	178.45	12358.58	5658.84	-5663.62	-559.25	0.93	366598.57	728599.77	N 32 0 20.70	W 103 35 45.11
	17875.00	90.86	178.20	12358.21	5753.82	-5758.57	-556.47	1.36	366503.61	728602.54	N 32 0 19.76	W 103 35 45.09
	17969.00	90.58	177.47	12357.02	5847.77	-5852.50	-552.92	0.83	366409.69	728606.09	N 32 0 18.83	W 103 35 45.06
	18064.00	91.55	178.67	12355.28	5942.72	-5947.43	-549.72	1.62	366314.77	728609.29	N 32 0 17.89	W 103 35 45.03
	18159.00	90.10	177.77	12353.89	6037.68	-6042.37	-546.77	1.80	366219.83	728612.24	N 32 0 16.95	W 103 35 45.00
	18253.00	91.86	177.32	12352.28	6131.60	-6136.26	-542.75	1.93	366125.94	728616.27	N 32 0 16.02	W 103 35 44.96
	18348.00	91.41	178.65	12349.57	6226.53	-6231.16	-539.41	1.48	366031.04	728619.61	N 32 0 15.08	W 103 35 44.93
	18442.00	92.96	178.93	12345.99	6320.45	-6325.07	-537.43	1.68	365937.14	728621.59	N 32 0 14.15	W 103 35 44.91
	18537.00	90.58	177.34	12343.05	6415.37	-6419.97	-534.34	3.01	365842.24	728624.68	N 32 0 13.21	W 103 35 44.88
	18632.00	90.34	178.57	12342.29	6510.33	-6514.90	-530.95	1.32	365747.31	728628.07	N 32 0 12.27	W 103 35 44.85
	18727.00	90.07	179.66	12341.95	6605.32	-6609.89	-529.48	1.18	365652.33	728629.54	N 32 0 11.33	W 103 35 44.84
	18822.00	90.65	180.92	12341.35	6700.31	-6704.88	-529.96	1.46	365557.34	728629.06	N 32 0 10.39	W 103 35 44.86
	18917.00	90.07	181.27	12340.76	6795.27	-6799.86	-531.77	0.71	365462.36	728627.24	N 32 0 9.45	W 103 35 44.89
	19011.00	90.45	179.94	12340.33	6889.25	-6893.85	-532.77	1.47	365368.37	728626.25	N 32 0 8.52	W 103 35 44.90
	19106.00	90.41	181.26	12339.62	6984.23	-6988.84	-533.76	1.39	365273.39	728625.26	N 32 0 7.58	W 103 35 44.92
	19201.00	89.97	180.75	12339.30	7079.20	-7083.83	-535.43	0.71	365178.40	728623.59	N 32 0 6.64	W 103 35 44.95
	19295.00	90.69	180.67	12338.76	7173.17	-7177.82	-536.59	0.77	365084.42	728622.43	N 32 0 5.71	W 103 35 44.97
	19390.00	90.34	181.17	12337.91	7268.14	-7272.80	-538.12	0.64	364989.44	728620.90	N 32 0 4.77	W 103 35 45.00
	19485.00	90.69	180.46	12337.05	7363.11	-7367.79	-539.47	0.83	364894.45	728619.55	N 32 0 3.83	W 103 35 45.02
	19579.00	90.17	180.84	12336.35	7457.09	-7461.78	-540.54	0.69	364800.47	728618.48	N 32 0 2.90	W 103 35 45.04
Toe HL Cross	19649.00	90.63	180.72	12335.86	7527.07	-7531.77	-541.49	0.67	364730.48	728617.33	N 32 0 2.21	W 103 35 45.06
	19674.00	90.79	180.68	12335.55	7552.07	-7556.77	-541.80	0.67	364705.48	728617.22	N 32 0 1.96	W 103 35 45.06
Last SLB MWD Survey	19739.00	90.14	181.63	12335.02	7617.04	-7621.75	-543.11	1.77	364640.50	728615.91	N 32 0 1.32	W 103 35 45.08
Projection to Bit	19780.00	90.14	181.63	12334.92	7658.01	-7662.73	-544.27	0.00	364599.52	728614.75	N 32 0 0.91	W 103 35 45.10

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 *** 3-D 97.071% Confidence 3.0000 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	24.500	1/98.425	30.000	30.000	A001Ma_MWD-Depth Only	SD EA 29 32 Fed Com P10 17H / Chevron SD EA 29 32 Fed Com
	1	24.500	31.500	Act Stns	30.000	30.000	A001Ma_MWD-Depth Only	SD EA 29 32 Fed Com P10 17H / Chevron SD EA 29 32 Fed Com
	1	31.500	832.500	Act Stns	30.000	30.000	A001Ma_MWD	SD EA 29 32 Fed Com P10 17H / Chevron SD EA 29 32 Fed Com
	1	832.500	19780.000	Act Stns	30.000	30.000	B001Ma_MWD+HDGM	SD EA 29 32 Fed Com P10 17H / Chevron SD EA 29 32 Fed Com

...SD EA 29 32 Fed Com P10 17H/Chevron SD EA 29 32 Fed Com P10 17H MWD to 19780ft