

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

July 4, 2019

CHEVRON USA INCORPORATED
6301 Deauville Blvd.
Midland, Texas, 79706

HOBBS OCD
MAR 12 2020
RECEIVED

S29, T26S, R33E, LEA NM
N 32.02110 W -103.59943

Re:

CLIENT: CHEVRON USA INCORPORATED
WELL: SD EA 29 32 Fed Com P11 16H
FIELD: UPPER WOLFCAMP

RIG: Nabors X30
COUNTY: LEA
API NO: 30-025-44336
JOB NO: 19MLD4335

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>
Ahmad Aldashti FE	SD EA 29 32 Fed Com P11 16H Original Hole	11686.00 Ft to 20216.00 Ft	June 16, 2019 to July 4, 2019	SlimPulse

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

Dana Lasher
Field Service Manager

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

Well Reference:
S29, T26S, R33E, LEA NM
N 32.02110 W -103.59943

I, Ahmad Aldashti certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of June 16, 2019 through July 04, 2019, conduct or supervise the taking of the SlimPulse surveys from a depth of 11686.00 feet to a depth of 20216.00 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 INCORPORATED for the SD EA 29 32 Fed Com P11 16H Well (Original Hole) API No. 30-025-44336 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
Ahmad Aldashti
FE

Subscribed and Sworn to before me this 1 day of August (month) 2019 (yr)

My Commission expires:

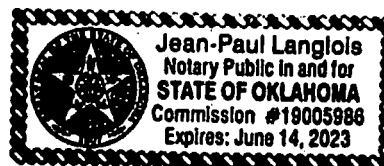
6/14/2023

Jean-Paul Langlois

(signature)

Notary Public

Comanche Oklahoma
(County State)



Chevron SD EA 29 32 Fed Com P11 16H MWD to 20292ft Survey Geodetic Report (Def Survey)



Report Date: July 05, 2019 - 09:15 AM
Client: Chevron
Field: NM Lea County (NAD 27)
Structure / Slot: Chevron SD EA 29 32 Fed Com P11 Pad / 16H
Well: SD EA 29 32 Fed Com P11 16H
Borehole: SD EA 29 32 Fed Com P11 16H
UWI / API#: Unknown / Unknown
Survey Name: Chevron SD EA 29 32 Fed Com P11 16H MWD to 20292ft
Survey Date: July 04, 2019
Tort / AHD / DDI / ERD Ratio: 220.156' / 8388.667' / 6.469' / 0.658
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 1' 15.95909" W 103° 35' 57.93359"
Location Grid N/E Y/X: N 372175.000 RUS, E 727458.000 RUS
CRS Grid Convergence Angle: 0.3892°
Grid Scale Factor: 0.99996835
Version / Patch: 2.10.760.0

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 = 32.6ft
TVD Reference Elevation: 3247.600 ft above
Seabed / Ground Elevation: 3215.000 ft above
Magnetic Declination: 6.680°
Total Gravity Field Strength: 998.4338mgn (9.80865 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47662.484 nT
Magnetic Dip Angle: 59.621°
Declination Date: July 04, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3892°
Total Corr Mag North-Grid North: 6.2709°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	372175.00	727458.00	N 32 1 15.96	W 103 35 57.93
Adjusted KB First 3rd Party Survey	33.00	0.00	0.00	33.00	0.00	0.00	0.00	0.00	372175.00	727458.00	N 32 1 15.96	W 103 35 57.93
	165.00	0.40	279.40	165.00	-0.08	0.08	-0.45	0.30	372175.08	727457.55	N 32 1 15.96	W 103 35 57.94
	253.00	0.70	320.20	253.00	-0.55	0.54	-1.10	0.54	372175.54	727456.90	N 32 1 15.96	W 103 35 57.95
	343.00	1.00	304.30	342.99	-1.42	1.40	-2.10	0.42	372176.40	727455.90	N 32 1 15.97	W 103 35 57.96
	444.00	0.90	330.70	443.97	-2.62	2.59	-3.22	0.44	372177.59	727454.78	N 32 1 15.98	W 103 35 57.97
529.00	0.90	287.90	528.96	-3.41	3.38	-4.18	0.77	372178.38	727453.82	N 32 1 15.99	W 103 35 57.98	
614.00	0.10	9.40	613.96	-3.70	3.68	-4.80	1.05	372178.68	727453.20	N 32 1 16.00	W 103 35 57.99	
698.00	0.50	254.65	697.96	-3.67	3.63	-5.15	0.85	372178.63	727452.85	N 32 1 16.00	W 103 35 57.99	
784.00	0.20	127.62	783.96	-3.49	3.44	-5.39	0.74	372178.44	727452.81	N 32 1 15.99	W 103 35 58.00	
840.00	0.40	212.70	839.96	-3.26	3.22	-5.42	0.77	372178.22	727452.58	N 32 1 15.99	W 103 35 58.00	
885.00	0.29	12.98	884.96	-3.24	3.20	-5.48	1.51	372178.20	727452.52	N 32 1 15.99	W 103 35 58.00	
980.00	1.63	73.21	979.94	-3.85	3.82	-4.13	1.59	372178.82	727453.87	N 32 1 16.00	W 103 35 57.98	
1074.00	3.11	69.87	1073.86	-5.09	5.08	-0.45	1.58	372180.08	727457.55	N 32 1 16.01	W 103 35 57.94	
1168.00	4.05	70.00	1167.67	-7.06	7.10	5.06	1.00	372182.10	727463.06	N 32 1 16.03	W 103 35 57.87	
1261.00	4.78	76.27	1260.40	-9.04	9.14	11.91	0.94	372184.14	727469.91	N 32 1 16.05	W 103 35 57.79	
1354.00	6.27	80.91	1352.96	-10.69	10.86	20.69	1.67	372185.86	727478.69	N 32 1 16.07	W 103 35 57.69	
1448.00	7.40	77.53	1448.29	-12.72	12.98	31.67	1.28	372187.98	727489.87	N 32 1 16.09	W 103 35 57.56	
1542.00	8.15	75.33	1539.43	-15.61	15.98	44.03	0.86	372190.98	727502.02	N 32 1 16.11	W 103 35 57.42	
1635.00	9.14	75.50	1631.37	-19.02	19.49	57.55	1.08	372194.49	727515.55	N 32 1 16.15	W 103 35 57.26	
1729.00	9.94	76.53	1724.07	-22.66	23.25	72.67	0.87	372198.25	727530.67	N 32 1 16.18	W 103 35 57.09	
1823.00	11.18	74.50	1818.48	-26.85	27.58	89.34	1.38	372202.58	727547.34	N 32 1 16.23	W 103 35 56.89	
1915.00	12.36	73.75	1906.54	-31.84	32.72	107.39	1.29	372207.72	727565.39	N 32 1 16.28	W 103 35 56.68	
2010.00	13.22	73.86	1999.18	-37.54	38.58	127.59	0.91	372213.58	727585.58	N 32 1 16.33	W 103 35 56.45	
2105.00	14.17	73.87	2091.48	-43.61	44.83	149.19	1.00	372219.83	727607.19	N 32 1 16.39	W 103 35 56.20	
2199.00	14.01	73.93	2182.65	-49.77	51.18	171.18	0.17	372226.18	727629.18	N 32 1 16.45	W 103 35 55.94	
2292.00	13.86	73.76	2272.92	-55.83	57.41	192.69	0.17	372232.41	727650.69	N 32 1 16.51	W 103 35 55.69	
2387.00	15.10	73.48	2384.80	-62.35	64.12	215.48	1.31	372239.11	727673.47	N 32 1 16.58	W 103 35 55.43	
2480.00	15.23	74.12	2454.66	-68.95	70.91	238.84	0.23	372245.90	727696.83	N 32 1 16.64	W 103 35 55.15	
2573.00	15.09	74.12	2544.42	-75.41	77.56	262.23	0.15	372252.56	727720.23	N 32 1 16.71	W 103 35 54.88	
2667.00	14.95	74.30	2635.21	-81.84	84.19	285.68	0.16	372259.19	727743.67	N 32 1 16.77	W 103 35 54.61	
2762.00	14.96	74.27	2726.99	-88.29	90.83	309.28	0.01	372265.83	727767.26	N 32 1 16.84	W 103 35 54.33	
2857.00	13.67	75.93	2819.04	-94.16	96.88	331.97	1.42	372271.88	727789.96	N 32 1 16.90	W 103 35 54.07	
2950.00	13.26	76.83	2909.49	-99.09	101.99	353.01	0.50	372276.98	727811.00	N 32 1 16.94	W 103 35 53.83	
3043.00	12.31	75.38	3000.18	-103.86	106.92	372.99	1.08	372281.91	727830.98	N 32 1 16.99	W 103 35 53.59	
3138.00	11.20	74.42	3091.23	-108.63	111.65	391.28	1.21	372286.84	727849.27	N 32 1 17.04	W 103 35 53.38	
3227.00	10.32	72.20	3180.63	-113.37	116.71	407.56	1.07	372291.71	727865.55	N 32 1 17.09	W 103 35 53.19	
3320.00	9.45	74.53	3272.25	-117.82	121.30	422.85	1.03	372296.29	727880.83	N 32 1 17.13	W 103 35 53.01	
3414.00	8.34	77.10	3365.11	-121.29	124.88	436.93	1.25	372299.67	727894.92	N 32 1 17.17	W 103 35 52.85	
3509.00	8.17	77.21	3459.13	-124.21	127.91	450.23	0.18	372302.90	727908.22	N 32 1 17.19	W 103 35 52.69	
3603.00	7.22	76.17	3552.28	-127.00	130.80	462.48	1.02	372305.79	727920.46	N 32 1 17.22	W 103 35 52.55	
3697.00	6.05	72.87	3645.65	-129.79	133.67	472.95	1.31	372308.67	727930.93	N 32 1 17.25	W 103 35 52.43	
3791.00	4.91	72.90	3739.22	-132.36	136.31	481.53	1.21	372311.31	727939.51	N 32 1 17.28	W 103 35 52.33	
3885.00	3.73	76.46	3832.95	-134.20	138.21	488.35	1.29	372313.21	727946.33	N 32 1 17.29	W 103 35 52.25	
3980.00	2.69	76.44	3927.80	-135.33	139.38	493.53	1.10	372314.36	727951.52	N 32 1 17.31	W 103 35 52.19	
4074.00	1.49	82.27	4021.74	-135.91	139.99	496.91	1.28	372314.68	727954.89	N 32 1 17.31	W 103 35 52.15	
4168.00	1.46	85.50	4115.71	-136.15	140.25	499.31	0.09	372315.24	727957.30	N 32 1 17.31	W 103 35 52.12	
4262.00	0.88	102.08	4209.69	-136.07	140.19	501.21	0.71	372315.18	727959.19	N 32 1 17.31	W 103 35 52.10	
4356.00	1.02	109.50	4303.67	-135.63	139.78	502.71	0.20	372314.75	727960.69	N 32 1 17.31	W 103 35 52.08	
4451.00	0.46	127.88	4398.67	-135.10	139.24	503.80	0.83	372314.24	727961.79	N 32 1 17.30	W 103 35 52.07	
4545.00	0.76	135.34	4492.66	-134.42	138.57	504.54	0.33	372313.56	727962.52	N 32 1 17.30	W 103 35 52.06	
4640.00	1.27	130.02	4587.84	-133.29	137.44	505.79	0.55	372312.44	727963.77	N 32 1 17.29	W 103 35 52.05	
4734.00	0.49	195.91	4681.83	-132.23	136.39	506.48	1.23	372311.38	727964.48	N 32 1 17.27	W 103 35 52.04	
4827.00	0.51	248.05	4774.83	-131.69	135.85	505.98	0.47	372310.84	727963.97	N 32 1 17.27	W 103 35 52.05	
4921.00	0.61	228.67	4868.83	-131.21	135.36	505.22	0.23	372310.36	727963.20	N 32 1 17.26	W 103 35 52.06	
5015.00	0.85	238.04	4962.82	-130.52	134.66	504.25	0.28	372309.68	727962.24	N 32 1 17.26	W 103 35 52.07	
5109.00	0.73	245.08	5056.81	-129.91	134.04	503.12	0.16	372309.04	727961.10	N 32 1 17.25	W 103 35 52.08	
5204.00	0.72	219.84	5151.60	-129.20	133.33	502.19	0.33	372308.32	727960.17	N 32 1 17.24	W 103 35 52.09	
5297.00	0.65	224.36	5244.60	-128.38	132.50	501.44	0.10	372307.50	727959.43	N 32 1 17.24	W 103 35 52.10	
5392.00	0.71	237.79	5339.59	-127.69	131.80	500.57	0.18	372306.80	727958.55	N 32 1 17.23	W 103 35 52.11	
5486.00	0.88	232.84	5433.58	-127.05	131.15	499.63	0.07	372306.15	727957.62	N 32 1 17.22	W 103 35 52.12	
5579.00	0.72	219.74	5528.58	-126.28	130.37	498.82	0.18	372305.37	727956.80	N 32 1 17.22	W 103 35 52.13	
5674.00	0.94	234.28	5621.57	-125.37	129.46	497.80	0.32	372304.45	727955.79	N 32 1 17.21	W 103 35 52.14	
5767.00	0.88	239.62	5714.55	-124.57	128.65	496.57	0.11	372303.65	727954.55	N 32 1 17.20	W 103 35 52.16	
5861.00	0.13	34.72	5808.55	-124.30	128.37	496.01	1.06	372303.37	727953.99	N 32 1 17.20	W 103 35 52.16	
5955.00	0.78	34.24	5902.55	-124.91	128.99	496.43	0.69	372303.99	727954.41	N 32 1 17.20	W 103 35 52.16	
6049.00	0.80	51.58	5996.54	-125.84	129.93	497.30	0.25	372304.82	727955.29	N 32 1 17.21	W 103 35 52.15	
6144.00	0.94	41.01	6091.53	-126.84	130.93	498.33	0.22	372305.92	727956.32	N 32 1 17.22	W 103 35 52.14	
6238.00	0.78	29.49	6185.52	-127.97	132.07	499.15	0.25	372307.06	727957.14	N 32 1 17.23	W 103 35 52.13	
6333.00	0.65	45.62	6280.51	-128.90	133.01	499.86	0.25	372308.00	727957.84	N 32 1 17.24	W 103 35 52.12	
6428.00	0.75	44.77	6375.50	-129.71	133.82	500.68	0.11	372308.82	727958.68	N 32 1 17.25	W 103 35 52.11	
6523.00	0.78	21.06	6470.49	-130.75	134.87	501.35	0.33	372309.86	727959.33	N 32 1 17.26	W 103 35 52.10	
6617.00	0.88	43.25	6564.49	-131.75	135.87	501.96	0.32	372310.87	727959.95	N 32 1 17		

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLB (ft/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	6806.00	0.62	40.28	6753.48	-133.47	137.60	502.85	0.33	372312.59	727960.83	N 32 1 17.29	W 103 35 52.08
	6900.00	0.54	18.08	6847.47	-134.28	138.41	503.30	0.27	372313.41	727961.28	N 32 1 17.29	W 103 35 52.08
	6995.00	0.28	21.33	6942.47	-134.92	139.06	503.51	0.28	372314.05	727961.49	N 32 1 17.30	W 103 35 52.07
	7090.00	0.58	28.38	7037.47	-135.56	139.70	503.82	0.32	372314.89	727961.80	N 32 1 17.31	W 103 35 52.07
	7184.00	0.56	51.11	7131.46	-136.26	140.40	504.40	0.24	372315.40	727962.39	N 32 1 17.31	W 103 35 52.06
	7277.00	0.64	137.23	7224.46	-136.16	140.31	505.11	0.88	372315.30	727963.09	N 32 1 17.31	W 103 35 52.06
	7371.00	0.96	170.20	7318.45	-134.99	139.15	505.60	0.58	372314.14	727963.58	N 32 1 17.30	W 103 35 52.05
	7484.00	1.18	166.77	7411.43	-133.29	137.45	505.95	0.25	372312.44	727963.93	N 32 1 17.29	W 103 35 52.05
	7557.00	0.73	164.73	7504.42	-131.78	135.94	506.33	0.49	372310.94	727964.31	N 32 1 17.27	W 103 35 52.04
	7652.00	0.88	178.83	7589.41	-130.49	134.64	506.50	0.25	372309.84	727964.48	N 32 1 17.26	W 103 35 52.04
	7746.00	1.23	182.87	7693.40	-128.77	132.93	506.46	0.40	372307.93	727964.45	N 32 1 17.24	W 103 35 52.04
	7839.00	0.79	197.81	7786.38	-127.17	131.32	506.22	0.55	372306.32	727964.20	N 32 1 17.22	W 103 35 52.04
	7933.00	0.81	201.09	7880.37	-125.93	130.09	505.78	0.05	372305.08	727963.78	N 32 1 17.21	W 103 35 52.05
	8027.00	0.85	194.47	7974.36	-124.84	128.79	505.37	0.11	372303.79	727963.35	N 32 1 17.20	W 103 35 52.05
	8122.00	0.85	210.00	8069.35	-123.35	127.50	504.84	0.24	372302.50	727962.82	N 32 1 17.19	W 103 35 52.06
	8216.00	1.03	214.10	8163.34	-122.06	126.20	504.02	0.20	372301.19	727962.00	N 32 1 17.17	W 103 35 52.07
	8310.00	0.75	183.96	8257.33	-120.75	124.88	503.50	0.57	372299.88	727961.48	N 32 1 17.16	W 103 35 52.08
	8404.00	0.73	180.04	8351.32	-119.54	123.67	503.46	0.08	372298.67	727961.44	N 32 1 17.15	W 103 35 52.08
	8505.00	0.66	166.86	8452.31	-118.33	122.46	503.59	0.17	372297.46	727961.57	N 32 1 17.14	W 103 35 52.08
	8598.00	0.61	171.03	8545.31	-117.31	121.45	503.79	0.07	372296.45	727961.77	N 32 1 17.13	W 103 35 52.07
	8692.00	0.62	178.85	8639.30	-116.31	120.45	503.88	0.09	372295.44	727961.88	N 32 1 17.12	W 103 35 52.07
	8786.00	0.65	184.20	8733.30	-115.27	119.41	503.85	0.07	372294.40	727961.83	N 32 1 17.11	W 103 35 52.07
	8879.00	0.82	189.20	8828.29	-114.09	118.22	503.70	0.20	372293.22	727961.89	N 32 1 17.10	W 103 35 52.07
	8973.00	0.66	200.06	8920.28	-112.92	117.05	503.41	0.23	372292.05	727961.39	N 32 1 17.08	W 103 35 52.08
	9067.00	0.80	212.57	9014.27	-111.86	115.99	502.87	0.22	372290.99	727960.85	N 32 1 17.07	W 103 35 52.08
	9161.00	1.06	241.70	9108.26	-110.91	115.03	501.75	0.57	372290.02	727959.74	N 32 1 17.06	W 103 35 52.10
	9255.00	1.65	260.61	9202.24	-110.29	114.39	499.65	0.78	372289.39	727957.63	N 32 1 17.06	W 103 35 52.12
	9348.00	2.42	270.72	9295.18	-110.12	114.20	498.37	0.91	372289.19	727954.35	N 32 1 17.06	W 103 35 52.16
	9442.00	2.93	278.52	9389.07	-110.54	114.58	492.01	0.67	372289.58	727949.99	N 32 1 17.06	W 103 35 52.21
	9535.00	2.46	278.00	9481.97	-111.24	115.24	487.68	0.51	372290.24	727945.67	N 32 1 17.07	W 103 35 52.26
	9628.00	1.73	282.87	9574.91	-111.40	115.38	484.32	1.01	372290.37	727942.30	N 32 1 17.07	W 103 35 52.30
	9721.00	1.84	271.24	9667.87	-111.27	115.23	481.60	0.29	372290.22	727939.58	N 32 1 17.07	W 103 35 52.33
	9813.00	2.06	274.44	9759.82	-111.45	115.38	478.63	0.47	372290.38	727936.82	N 32 1 17.07	W 103 35 52.37
	9900.00	0.98	300.00	9846.79	-111.96	115.88	476.43	1.44	372290.87	727934.41	N 32 1 17.07	W 103 35 52.39
	9993.00	1.16	60.87	9939.78	-112.82	116.73	476.56	2.00	372291.73	727934.55	N 32 1 17.08	W 103 35 52.39
	10087.00	1.59	77.27	10033.75	-113.55	117.48	478.67	0.81	372292.48	727936.65	N 32 1 17.09	W 103 35 52.36
	10181.00	1.16	84.66	10127.73	-113.91	117.86	480.89	0.49	372292.85	727938.87	N 32 1 17.09	W 103 35 52.34
	10275.00	0.98	77.31	10221.71	-114.16	118.12	482.62	0.24	372293.12	727940.80	N 32 1 17.10	W 103 35 52.32
	10371.00	0.87	85.66	10317.70	-114.38	118.36	484.15	0.18	372293.35	727942.13	N 32 1 17.10	W 103 35 52.30
	10465.00	0.70	68.98	10411.69	-114.63	118.62	485.39	0.30	372293.81	727943.38	N 32 1 17.10	W 103 35 52.29
	10560.00	0.53	104.98	10506.68	-114.72	118.71	486.36	0.43	372293.71	727944.34	N 32 1 17.10	W 103 35 52.28
	10654.00	0.73	109.51	10600.68	-114.40	118.40	487.35	0.22	372293.39	727945.33	N 32 1 17.10	W 103 35 52.26
	10749.00	0.87	106.02	10695.67	-113.99	118.00	488.61	0.16	372292.99	727946.59	N 32 1 17.09	W 103 35 52.25
	10843.00	0.53	115.15	10789.66	-113.59	117.62	489.89	0.38	372292.81	727947.67	N 32 1 17.09	W 103 35 52.24
	10937.00	0.35	92.47	10883.66	-113.39	117.42	490.37	0.26	372292.41	727948.35	N 32 1 17.09	W 103 35 52.23
	11031.00	0.38	120.99	10977.66	-113.22	117.25	490.91	0.19	372292.25	727948.89	N 32 1 17.09	W 103 35 52.22
	11125.00	0.14	149.38	11071.68	-112.97	117.00	491.22	0.26	372292.00	727949.20	N 32 1 17.08	W 103 35 52.22
	11219.00	0.22	74.51	11165.66	-112.92	116.95	491.45	0.24	372291.95	727949.44	N 32 1 17.08	W 103 35 52.22
	11313.00	0.09	94.66	11259.66	-112.96	116.99	491.70	0.15	372291.89	727949.68	N 32 1 17.08	W 103 35 52.21
	11407.00	0.84	96.50	11353.65	-112.89	116.93	492.30	0.59	372291.83	727950.28	N 32 1 17.08	W 103 35 52.21
	11502.00	0.92	104.77	11448.64	-112.82	116.67	493.56	0.32	372291.67	727951.54	N 32 1 17.08	W 103 35 52.19
Last 3rd Party Survey First SLB MWD Survey	11583.00	0.90	98.45	11529.63	-112.35	116.42	494.82	0.13	372291.41	727952.80	N 32 1 17.08	W 103 35 52.18
	11688.00	0.48	103.44	11632.63	-112.12	116.20	496.04	0.41	372291.19	727954.02	N 32 1 17.08	W 103 35 52.18
	11780.00	0.55	118.56	11728.62	-111.81	115.89	496.82	0.16	372290.89	727954.80	N 32 1 17.07	W 103 35 52.15
	11874.00	0.55	143.29	11820.62	-111.23	115.31	497.48	0.25	372290.31	727955.47	N 32 1 17.07	W 103 35 52.15
	11969.00	0.65	139.44	11915.61	-110.45	114.54	498.11	0.11	372289.53	727956.09	N 32 1 17.06	W 103 35 52.14
	12064.00	0.75	153.56	12010.61	-109.48	113.57	498.73	0.21	372288.57	727956.72	N 32 1 17.05	W 103 35 52.13
	12158.00	5.00	177.25	12104.47	-104.83	108.93	499.20	4.60	372283.92	727957.19	N 32 1 17.00	W 103 35 52.13
	12253.00	8.17	206.51	12198.85	-94.67	98.75	498.39	4.76	372273.74	727954.37	N 32 1 16.90	W 103 35 52.16
	12254.00	8.24	206.47	12199.84	-94.54	98.62	496.32	7.35	372273.61	727954.31	N 32 1 16.90	W 103 35 52.16
	12347.00	15.07	204.58	12290.87	-77.63	81.63	488.31	7.35	372256.63	727946.30	N 32 1 16.73	W 103 35 52.26
Heel HL Cross	12442.00	19.91	195.68	12381.47	-50.68	54.81	478.80	5.81	372229.81	727936.78	N 32 1 16.47	W 103 35 52.37
	12490.00	23.03	188.60	12426.15	-33.70	37.60	475.51	9.48	372212.60	727933.49	N 32 1 16.30	W 103 35 52.41
	12537.00	26.58	184.92	12468.80	-14.10	17.99	473.55	7.70	372192.99	727931.53	N 32 1 16.11	W 103 35 52.43
	12632.00	35.22	179.51	12550.26	34.55	-30.68	471.98	9.55	372144.32	727929.94	N 32 1 15.62	W 103 35 52.45
	12727.00	44.54	173.68	12623.11	95.24	-91.34	475.87	10.56	372083.66	727933.85	N 32 1 15.02	W 103 35 52.41
	12821.00	57.89	169.49	12681.87	167.59	-163.60	468.81	14.62	372011.41	727944.80	N 32 1 14.31	W 103 35 52.29
	12907.00	71.70	167.68	12718.41	243.78	-239.67	502.24	16.17	371935.34	727960.23	N 32 1 13.55	W 103 35 52.12
	12962.00	80.22	166.28	12731.74	295.81	-291.60	514.27	15.69	371883.41	727972.26	N 32 1 13.04	W 103 35 51.98
	13009.00	87.39	165.66	12736.81	341.20	-336.90	525.60	15.31	371838.11	727983.59	N 32 1 12.59	W 103 35 51.86
	13103.00	89.79	166.85	12739.12	432.65	-428.17	547.93	2.85	371746.84	728005.91	N 32 1 11.89	W 103 35 51.60
	13197.00	92.06	168.96	12737.60	524.70	-520.06	567.62	3.30	371654.96	728025.60	N 32 1 10.77	W 103 35 51.38
	13264.00	92.41	168.46	12734.99	590.46	-585.71	580.73	0.91	371589.31	728038.71	N 32 1 10.12	W 103 35 51.24
	13322.00	92.51	167.21	12732.50	647.20	-642.36	592.94	2.16	371532.68	728050.92	N 32 1 9.58	W 103 35 51.10
	13417.00	92.93	170.07	12727.99	740.37	-735.38	611.63	3.04	371439.64	728069.81	N 32 1 8.64	W 103 35 50.89
	13512.00	92.30	172.08	12723.68	834.24	-829.13	626.35	2.22	371345.90	728084.33	N 32 1 7.71	W 103 35 50.72

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 ° ' ")
	16433.00	89.83	179.91	12721.32	3750.77	-3744.89	732.60	1.68	368430.24	728190.58	N 32 0 38.85	W 103 35 49.72
	16528.00	89.83	179.05	12721.60	3845.77	-3839.88	733.46	0.91	368335.25	728191.44	N 32 0 37.91	W 103 35 49.72
	16623.00	89.86	179.10	12721.88	3940.78	-3934.87	735.00	0.08	368240.26	728192.97	N 32 0 36.97	W 103 35 49.71
	16717.00	89.90	179.13	12722.05	4034.78	-4028.88	738.45	0.05	368146.28	728194.43	N 32 0 36.04	W 103 35 49.70
	16907.00	89.21	178.88	12723.53	4224.75	-4218.82	739.75	0.39	367956.32	728197.72	N 32 0 34.16	W 103 35 49.68
	17002.00	89.42	179.54	12724.66	4319.74	-4313.80	741.08	0.73	367861.34	728199.03	N 32 0 33.22	W 103 35 49.67
	17096.00	88.63	178.55	12726.26	4413.72	-4407.78	742.83	1.35	367767.37	728200.60	N 32 0 32.29	W 103 35 49.66
	17191.00	88.90	178.86	12728.31	4508.69	-4502.73	744.77	0.43	367672.42	728202.75	N 32 0 31.35	W 103 35 49.64
	17361.00	90.00	177.82	12730.13	4698.63	-4692.64	750.28	0.80	367482.52	728208.25	N 32 0 29.47	W 103 35 49.59
	17475.00	90.07	179.82	12730.08	4792.62	-4788.61	752.21	2.13	367388.55	728210.19	N 32 0 28.54	W 103 35 49.58
	17666.00	89.79	180.03	12730.31	4983.62	-4977.61	752.46	0.18	367197.56	728210.44	N 32 0 26.65	W 103 35 49.59
	17856.00	90.41	180.93	12729.98	5173.59	-5167.60	750.87	0.58	367007.57	728208.84	N 32 0 24.77	W 103 35 49.62
	17950.00	90.21	180.46	12729.47	5267.56	-5261.59	749.73	0.54	366913.59	728207.70	N 32 0 23.84	W 103 35 49.64
	18139.00	89.42	181.14	12730.08	5456.51	-5450.57	747.09	0.55	366724.61	728205.07	N 32 0 21.97	W 103 35 49.69
	18234.00	89.00	182.26	12731.39	5551.44	-5545.52	744.27	1.26	366629.67	728202.25	N 32 0 21.03	W 103 35 49.73
	18423.00	88.76	180.67	12735.09	5740.29	-5734.41	739.44	0.85	366440.78	728197.42	N 32 0 19.16	W 103 35 49.80
	18518.00	89.42	180.60	12736.59	5835.26	-5829.39	738.39	0.70	366345.80	728196.36	N 32 0 18.22	W 103 35 49.82
	18612.00	89.66	180.54	12737.35	5929.24	-5923.39	737.45	0.26	366251.81	728195.43	N 32 0 17.29	W 103 35 49.84
	18801.00	89.79	180.85	12738.26	6118.20	-6112.37	735.16	0.18	366062.83	728193.14	N 32 0 15.42	W 103 35 49.88
	18895.00	90.14	180.99	12738.31	6212.17	-6206.36	733.65	0.40	365968.85	728191.63	N 32 0 14.49	W 103 35 49.90
	18987.00	90.38	180.75	12737.90	6304.14	-6298.35	732.28	0.37	365876.87	728190.23	N 32 0 13.58	W 103 35 49.93
	19082.00	90.03	181.37	12737.56	6399.11	-6393.33	730.50	0.75	365781.89	728188.47	N 32 0 12.64	W 103 35 49.96
	19177.00	89.28	180.59	12738.13	6494.07	-6488.31	728.87	1.14	365686.91	728186.85	N 32 0 11.70	W 103 35 49.98
	19271.00	89.83	180.28	12738.86	6588.06	-6582.31	728.16	0.87	365592.92	728186.13	N 32 0 10.77	W 103 35 50.00
	19365.00	90.45	180.96	12738.63	6682.04	-6676.30	727.14	0.98	365498.93	728185.12	N 32 0 9.84	W 103 35 50.02
	19459.00	90.38	179.81	12737.95	6778.02	-6772.29	726.51	1.23	365404.93	728184.49	N 32 0 8.91	W 103 35 50.03
	19648.00	90.31	178.54	12736.81	6965.01	-6959.27	729.23	0.87	365215.97	728187.21	N 32 0 7.04	W 103 35 50.01
	19743.00	90.34	177.89	12736.27	7059.99	-7054.22	732.19	0.88	365121.02	728190.17	N 32 0 6.10	W 103 35 49.99
	19836.00	90.28	176.80	12735.77	7152.96	-7147.18	734.88	0.98	365028.06	728192.85	N 32 0 5.18	W 103 35 49.96
	20026.00	90.79	179.01	12733.99	7342.94	-7337.13	738.51	0.29	364838.11	728196.48	N 32 0 3.30	W 103 35 49.94
	20121.00	89.79	178.77	12733.51	7437.94	-7432.11	740.35	1.08	364743.14	728198.32	N 32 0 2.38	W 103 35 49.92
Last SLB MWD Survey	20216.00	89.59	178.44	12734.03	7532.92	-7527.08	742.68	0.41	364648.17	728200.64	N 32 0 1.42	W 103 35 49.90
Toe HL Cross	20217.00	89.59	178.44	12734.03	7533.92	-7528.08	742.69	0.00	364647.17	728200.66	N 32 0 1.41	W 103 35 49.90
Projection to Bit	20292.00	89.59	178.44	12734.57	7608.91	-7603.05	744.73	0.00	364572.20	728202.70	N 32 0 0.67	W 103 35 49.89

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	32.600	1/98.425	30.000	30.000	A001Ma_MWD-Depth Only	SD EA 29 32 Fed Com P11 16H / Chevron SD EA 29 32 Fed Com
	1	32.600	32.600	Act Stns	30.000	30.000	A001Ma_MWD-Depth Only	SD EA 29 32 Fed Com P11 16H / Chevron SD EA 29 32 Fed Com
	1	32.600	11583.000	Act Stns	30.000	30.000	A001Ma_MWD	SD EA 29 32 Fed Com P11 16H / Chevron SD EA 29 32 Fed Com
	1	11583.000	20292.000	Act Stns	30.000	30.000	B001Ma_MWD+HDGM	SD EA 29 32 Fed Com P11 16H / Chevron SD EA 29 32 Fed Com