

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

OCD-ARTESIA
REC'D: 8/13/2020
Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

"As-Drilled"

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45103		² Pool Code 98220		³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)	
⁴ Property Code 321649		⁵ Property Name HH SO 17 20 FED 001			⁶ Well Number 6H
⁷ OGRID No. 4323		⁸ Operator Name CHEVRON U.S.A. INC.			⁹ Elevation 3258'

¹⁰ Surface Location

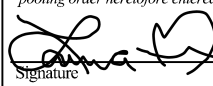
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	8	26 SOUTH	27 EAST, N.M.P.M.		205'	SOUTH	1872'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	20	26 SOUTH	27 EAST, N.M.P.M.		255'	SOUTH	347'	WEST	EDDY

¹² Dedicated Acres 640	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ KICK OFF POINT X= 535,534' Y= 382,031' LAT. 32.050265° N LONG. 104.218642° W NAD 27 X= 576,718' Y= 382,088' LAT. 32.050387° N LONG. 104.219136° W NAD83/86 FINAL FIRST TAKE POINT X= 535,503' Y= 381,462' LAT. 32.048703° N LONG. 104.218744° W NAD 27 X= 576,687' Y= 381,519' LAT. 32.048824° N LONG. 104.219238° W NAD83/86 MID POINT X= 535,409' Y= 376,480' LAT. 32.035006° N LONG. 104.219067° W NAD 27 X= 576,592' Y= 376,537' LAT. 32.035128° N LONG. 104.219560° W NAD83/86 FINAL LAST TAKE POINT X= 535,426' Y= 371,566' LAT. 32.021498° N LONG. 104.219027° W NAD 27 X= 576,610' Y= 371,623' LAT. 32.021620° N LONG. 104.219520° W NAD83/86		HH SO 17 20 FED 001 6H WELL X= 536,858' Y= 382,012' LAT. 32.050209° N LONG. 104.214369° W NAD 27 X= 578,042' Y= 382,069' LAT. 32.050331° N LONG. 104.214863° W NAD83/86 ELEV. +3258' NAVD 88 CORNER COORDINATES TABLE (NAD 27) A - Y=387143.09, X=534935.36 B - Y=381810.94, X=534988.20 C - Y=381799.23, X=540303.95 D - Y=376480.27, X=535066.16 E - Y=376474.90, X=540354.10 F - Y=371149.70, X=535082.62 G - Y=371148.59, X=540391.30 ACTUAL BOTTOM HOLE LOCATION X= 535,429' Y= 371,404' LAT. 32.021053° N LONG. 104.219019° W NAD 27 X= 576,612' Y= 371,461' LAT. 32.021176° N LONG. 104.219513° W NAD83/86		Sec. 8 1872' 205' Kick Off Point @ 9,261' MD 221' FSL, 548' FWL Final First Take Point @ 10,096' MD 348' FNL, 510' FWL Sec. 17 Mid Point @ 15,152.76 MD Sec. 20 Final Last Take Point @ 20,019' MD 417' FSL, 345' FWL 255' 347'		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  3/3/20202 Signature Date Laura Becerra Printed Name LBecerra@Chevron.com E-mail Address ¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. 06/25/2019 Date of Survey Signature and Seal of Professional Surveyor:  11/12/2019 Certificate Number	
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Intent ☐ As Drilled ☒

API # 30-015-45103			
Operator Name: CHEVRON USA INC		Property Name: HH SO 17 20 FED 001	Well Number 6H

Kick Off Point (KOP)

UL M	Section 8	Township 26S	Range 27E	Lot	Feet 221	From N/S FSL	Feet 548	From E/W FWL	County EDDY
Latitude 32.050387					Longitude 104.219136				NAD NAD 83/86

First Take Point (FTP)

UL D	Section 17	Township 26S	Range 27E	Lot	Feet 348	From N/S FNL	Feet 510	From E/W FWL	County EDDY
Latitude 32.048824					Longitude 104.219238				NAD NAD 83/86

Last Take Point (LTP)

UL M	Section 20	Township 26S	Range 27E	Lot	Feet 417	From N/S FSL	Feet 345	From E/W FWL	County EDDY
Latitude 32.021620					Longitude 104.219520				NAD NAD 83/86

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #			
Operator Name:		Property Name:	Well Number

KZ 06/29/2018

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)



April 29, 2019

Chevron USA Incorporated

8, 26S, 27E, Eddy NM
32.05033 104.21487

Re:

CLIENT: Chevron USA Incorporated
WELL: HH SO 17 20 FED 001 No. 6H
FIELD: Purple Sage-Wolfcamp (Gas)

RIG: Patterson 270
COUNTY: Eddy
API NO: 30-015-45103
JOB NO: 18MLD3951

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>
A. Alshuker FE	HH SO 17 20 FED 001 No. 6H Original Hole	200.00 Ft to 20137.00 Ft	August 30, 2018 to April 18, 2019	TelePacer SlimPulse

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

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:

8, 26S, 27E, Eddy NM
32.05033 104.21487

I, A. Alshuker certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 30, 2018 through April 18, 2019, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 200.00 feet to a depth of 20137.00 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 HH SO 17 20 FED 001 No. 6H Well (Original Hole) API No. 30-015-45103 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
A. Alshuker
FE



Subscribed and Sworn to before me this 29th day of April (month) 2019 (yr)

My Commission expires:

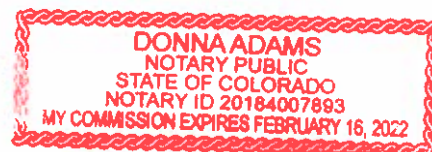
2-16-2022

D. Adams

(signature)

Notary Public

Adams County Colorado
(County State)





Chevron HH SO 17 20 Fed 001 No. 6H MWD to 20181ft Survey Geodetic Report (Def Survey)



Report Date: April 18, 2019 - 03:17 PM
Client: Chevron
Field: NM Eddy County (NAD 27)
Structure / Slot: Chevron HH SO 17 20 Fed 001 No. 6H / HH SO 17 20 Fed 001 No. 6H
Well: HH SO 17 20 Fed 001 No. 6H
Borehole: HH SO 17 20 Fed 001 No. 6H
UWI / API#: Unknown / Unknown
Survey Name: Chevron HH SO 17 20 Fed 001 No. 6H MWD to 20181ft
Survey Date: April 18, 2019
Turn / AHD / DDI / ERD Ratio: 315.672 ° / 12009.101 ft / 6.901 / 1.249
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 3' 0.75647", W 104° 12' 51.73086"
Location Grid N/E Y/X: N 382012.000 ftUS, E 536858.000 ftUS
CRS Grid Convergence Angle: 0.0631 °
Grid Scale Factor: 0.99991065
Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.490 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB = 28ft
TVD Reference Elevation: 3286.000 ft above MSL
Seabed / Ground Elevation: 3258.000 ft above MSL
Magnetic Declination: 7.240 °
Total Gravity Field Strength: 998.4300mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47784.933 nT
Magnetic Dip Angle: 59.664 °
Declination Date: April 18, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.0631 °
Total Corr Mag North->Grid North: 7.1765 °
Local Coord Referenced To: Well Head

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 ° ' '')
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	382012.00	536858.00	N 32 3 0.76	W 104 12 51.73
First SLB MWD Survey	200.00	1.52	279.53	199.98	-0.46	0.44	-2.62	0.76	382012.44	536855.38	N 32 3 0.76	W 104 12 51.76
	232.00	1.53	274.37	231.97	-0.57	0.54	-3.46	0.43	382012.54	536854.54	N 32 3 0.76	W 104 12 51.77
	405.00	1.24	278.59	404.91	-1.07	1.00	-7.61	0.18	382013.00	536850.39	N 32 3 0.77	W 104 12 51.82
	594.00	2.27	265.86	593.82	-1.15	1.03	-13.37	0.58	382013.03	536844.63	N 32 3 0.77	W 104 12 51.89
	687.00	3.17	264.36	686.72	-0.81	0.65	-17.77	0.97	382012.65	536840.24	N 32 3 0.76	W 104 12 51.94
	780.00	3.14	261.65	779.58	-0.23	0.02	-22.84	0.16	382012.02	536835.16	N 32 3 0.76	W 104 12 52.00
	873.00	3.58	266.57	872.42	0.27	-0.52	-28.26	0.57	382011.48	536829.74	N 32 3 0.75	W 104 12 52.06
	968.00	5.19	270.12	967.14	0.37	-0.69	-35.52	1.72	382011.31	536822.48	N 32 3 0.75	W 104 12 52.14
	1063.00	7.36	272.60	1061.56	0.25	-0.66	-45.90	2.28	382011.34	536812.10	N 32 3 0.75	W 104 12 52.26
	1157.00	8.75	271.60	1154.63	-0.09	-0.43	-59.07	1.49	382011.57	536798.93	N 32 3 0.75	W 104 12 52.42
	1252.00	9.73	272.60	1248.40	-0.80	0.13	-74.32	1.05	382012.13	536783.69	N 32 3 0.76	W 104 12 52.59
	1347.00	10.80	272.69	1341.88	-1.73	0.92	-91.23	1.13	382012.92	536766.78	N 32 3 0.77	W 104 12 52.79
	1442.00	11.98	272.13	1435.00	-2.68	1.70	-109.97	1.25	382013.70	536748.04	N 32 3 0.77	W 104 12 53.01
	1537.00	13.57	271.51	1527.65	-3.53	2.36	-130.97	1.68	382014.36	536727.05	N 32 3 0.78	W 104 12 53.25
	1632.00	12.84	271.31	1620.14	-4.25	2.89	-152.66	0.77	382014.89	536705.35	N 32 3 0.79	W 104 12 53.50
	1727.00	13.07	272.17	1712.72	-5.09	3.54	-173.95	0.32	382015.54	536684.07	N 32 3 0.79	W 104 12 53.75
	1822.00	14.04	271.37	1805.07	-5.97	4.23	-196.20	1.04	382016.22	536661.82	N 32 3 0.80	W 104 12 54.01
	1916.00	15.67	270.82	1895.93	-6.64	4.68	-220.30	1.74	382016.68	536637.72	N 32 3 0.81	W 104 12 54.29
	2011.00	15.83	271.60	1987.36	-7.42	5.22	-246.08	0.28	382017.22	536611.95	N 32 3 0.81	W 104 12 54.59
	2106.00	14.82	272.40	2078.98	-8.51	6.10	-271.17	1.09	382018.09	536586.86	N 32 3 0.82	W 104 12 54.88
	2201.00	15.37	274.26	2170.70	-10.17	7.54	-295.86	0.77	382019.54	536562.16	N 32 3 0.83	W 104 12 55.17
	2296.00	15.56	273.84	2262.26	-12.19	9.33	-321.13	0.23	382021.33	536536.90	N 32 3 0.85	W 104 12 55.46
	2391.00	15.28	273.19	2353.84	-13.96	10.88	-346.34	0.35	382022.88	536511.69	N 32 3 0.87	W 104 12 55.75
	2580.00	14.97	273.36	2536.30	-17.21	13.69	-395.58	0.17	382025.69	536462.46	N 32 3 0.90	W 104 12 56.33
	2675.00	14.90	273.12	2628.09	-18.82	15.08	-420.02	0.10	382027.08	536438.02	N 32 3 0.91	W 104 12 56.61
	2769.00	14.59	272.92	2718.99	-20.29	16.34	-443.91	0.33	382028.34	536414.13	N 32 3 0.92	W 104 12 56.89
	2865.00	15.03	272.37	2811.80	-21.64	17.47	-468.43	0.48	382029.47	536389.62	N 32 3 0.93	W 104 12 57.17
	3054.00	14.40	272.13	2994.60	-23.95	19.36	-516.40	0.33	382031.36	536341.65	N 32 3 0.95	W 104 12 57.73
	3149.00	15.07	271.18	3086.48	-24.86	20.05	-540.55	0.75	382032.05	536317.50	N 32 3 0.96	W 104 12 58.01
	3244.00	16.69	270.47	3177.85	-25.46	20.42	-566.54	1.72	382032.41	536291.51	N 32 3 0.96	W 104 12 58.31
	3340.00	16.92	270.91	3269.75	-26.04	20.75	-594.29	0.27	382032.75	536263.76	N 32 3 0.97	W 104 12 58.64
	3434.00	16.39	271.13	3359.81	-26.76	21.23	-621.23	0.57	382033.23	536236.83	N 32 3 0.97	W 104 12 58.95
	3623.00	15.07	270.69	3541.72	-28.04	22.05	-672.46	0.70	382034.05	536185.60	N 32 3 0.98	W 104 12 59.54
	3718.00	14.35	270.79	3633.61	-28.56	22.36	-696.58	0.76	382034.36	536161.48	N 32 3 0.99	W 104 12 59.82
	3813.00	14.32	270.44	3725.65	-29.02	22.62	-720.10	0.10	382034.61	536137.97	N 32 3 0.99	W 104 13 0.10
	3908.00	15.26	269.72	3817.50	-29.27	22.64	-744.35	1.01	382034.64	536113.72	N 32 3 0.99	W 104 13 0.38
	4002.00	15.72	269.66	3908.09	-29.36	22.51	-769.46	0.49	382034.51	536088.62	N 32 3 0.99	W 104 13 0.67
	4097.00	15.09	270.24	3999.67	-29.56	22.48	-794.69	0.68	382034.48	536063.38	N 32 3 0.99	W 104 13 0.96
	4191.00	14.07	269.92	4090.65	-29.80	22.52	-818.35	1.09	382034.52	536039.72	N 32 3 0.99	W 104 13 1.24
	4285.00	14.21	270.19	4181.80	-30.03	22.54	-841.32	0.16	382034.54	536016.76	N 32 3 0.99	W 104 13 1.51
	4380.00	15.26	269.07	4273.67	-30.08	22.38	-865.48	1.15	382034.38	535992.60	N 32 3 0.99	W 104 13 1.79
	4475.00	15.93	267.51	4365.18	-29.54	21.61	-891.00	0.83	382033.61	535967.08	N 32 3 0.98	W 104 13 2.08
	4570.00	16.70	268.83	4456.35	-28.93	20.76	-917.67	0.90	382032.76	535940.41	N 32 3 0.97	W 104 13 2.39
	4665.00	16.66	269.99	4547.35	-28.89	20.48	-944.94	0.35	382032.48	535913.15	N 32 3 0.97	W 104 13 2.71
	4760.00	15.92	271.62	4638.54	-29.50	20.85	-971.58	0.92	382032.85	535886.51	N 32 3 0.97	W 104 13 3.02
	4855.00	15.88	271.47	4729.90	-30.43	21.55	-997.60	0.06	382033.55	535860.49	N 32 3 0.98	W 104 13 3.32
	4950.00	15.56	271.23	4821.35	-31.26	22.16	-1023.33	0.34	382034.15	535834.76	N 32 3 0.99	W 104 13 3.62
	5045.00	15.44	272.89	4912.90	-32.40	23.07	-1048.70	0.48	382035.07	535809.40	N 32 3 1.00	W 104 13 3.91
	5140.00	15.19	270.30	5004.52	-33.33	23.77	-1073.77	0.77	382035.77	535784.32	N 32 3 1.00	W 104 13 4.21
	5235.00	15.10	271.19	5096.22	-33.87	24.09	-1098.59	0.26	382036.09	535759.51	N 32 3 1.01	W 104 13 4.49
	5329.00	15.08	270.88	5186.98	-34.53	24.53	-1123.06	0.09	382036.53	535735.04	N 32 3 1.01	W 104 13 4.78
	5423.00	14.75	270.42	5277.82	-35.02	24.81	-1147.25	0.37	382036.81	535710.85	N 32 3 1.01	W 104 13 5.06
	5517.00	14.17	270.98	5368.84	-35.51	25.09	-1170.72	0.63	382037.09	535687.39	N 32 3 1.02	W 104 13 5.33
	5612.00	13.75	270.54	5461.03	-36.02	25.40	-1193.64	0.46	382037.40	535664.47	N 32 3 1.02	W 104 13 5.60
	5706.00	12.74	268.85	5552.53	-36.11	25.30	-1215.17	1.15	382037.29	535642.94	N 32 3 1.02	W 104 13 5.85
	5801.00	11.81	267.03	5645.36	-35.58	24.58	-1235.35	1.06	382036.58	535622.76	N 32 3 1.01	W 104 13 6.08
	5896.00	11.23	266.35	5738.44	-34.65	23.49	-1254.29	0.63	382035.49	535603.82	N 32 3 1.00	W 104 13 6.30
	5987.00	9.81	264.44	5827.91	-33.49	22.18	-1270.85	1.61	382034.17	535587.26	N 32 3 0.99	W 104 13 6.50
	6082.00	7.73	262.97	5921.80	-32.05	20.61	-1285.25	2.20	382032.61	535572.87	N 32 3 0.97	W 104 13 6.66
	6177.00	6.32	265.76	6016.08	-30.98	19.44	-1296.81	1.53	382031.44	535561.31	N 32 3 0.96	W 104 13 6.80
	6272.00	4.54	270.51	6110.65	-30.71	19.09	-1305.78	1.93	382031.09	535552.34	N 32 3 0.96	W 104 13 6.90
	6367.00	2.74	265.06	6205.46	-30.60	18.93	-1311.81	1.93	382030.92	535546.31	N 32 3 0.96	W 104 13 6.97
	6462.00	2.07	264.20	6300.37	-30.27	18.56	-1315.77	0.71	382030.55	535542.35	N 32 3 0.95	W 104 13 7.02
	6556.00	1.51	294.54	6394.33	-30.64	18.90	-1318.59	1.15	382030.90	535539.53	N 32 3 0.96	W 104 13 7.05
	6652.00	1.43	293.03	6490.30	-31.65	19.89	-1320.84	0.09	382031.89	535537.28	N 32 3 0.97	W 104 13 7.08
	6746.00	1.40	270.39	6584.27	-32.14	20.36	-1323.07	0.59	382032.36	535535.05	N 32 3 0.97	W 104 13 7.10
	6841.00	1.13	272.37	6679.24	-32.20	20.41	-1325.17	0.29	382032.40	535532.95	N 32 3 0.97	W 104 13 7.13
	6936.00	0.95	258.11	6774.23	-32.09	20.28	-1326.87	0.33	382032.28	535531.25	N 32 3 0.97	W 104 13 7.15
	7031.00	0.75	268.11	6869.22	-31.92	20.10	-1328.27	0.26	382032.10	535529.86	N 32 3 0.97	W 104 13 7.16
	7126.00	0.56	273.80	6964.21	-31.94	20.11	-1329.35	0.21	382032.11	535528.77	N 32 3 0.97	W 104 13 7.18
	7220.00	0										

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 ° ' ")
	7684.00	0.73	180.44	7532.20	-31.09	19.26	-1329.46	0.26	382031.26	535528.66	N 32 3 0.96	W 104 13 7.18
	7789.00	0.65	192.67	7627.19	-29.96	18.13	-1329.58	0.18	382030.12	535528.54	N 32 3 0.95	W 104 13 7.18
	7884.00	0.90	182.55	7722.18	-28.69	16.86	-1329.73	0.30	382028.85	535528.39	N 32 3 0.94	W 104 13 7.18
	7979.00	1.03	119.63	7817.17	-27.52	15.69	-1329.02	1.07	382027.69	535529.10	N 32 3 0.93	W 104 13 7.17
	8075.00	1.30	91.83	7913.15	-27.04	15.23	-1327.18	0.64	382027.23	535530.94	N 32 3 0.92	W 104 13 7.15
	8169.00	0.98	97.34	8007.13	-26.89	15.09	-1325.32	0.36	382027.09	535532.80	N 32 3 0.92	W 104 13 7.13
	8264.00	0.83	40.97	8102.12	-27.29	15.51	-1324.06	0.91	382027.50	535534.06	N 32 3 0.92	W 104 13 7.11
	8359.00	0.95	10.89	8197.11	-28.58	16.80	-1323.46	0.50	382028.80	535534.66	N 32 3 0.94	W 104 13 7.11
	8454.00	0.52	6.05	8292.10	-29.78	18.00	-1323.27	0.46	382030.00	535534.85	N 32 3 0.95	W 104 13 7.10
	8548.00	0.24	341.39	8386.10	-30.39	18.61	-1323.29	0.34	382030.61	535534.83	N 32 3 0.95	W 104 13 7.11
	8643.00	0.51	29.57	8481.10	-30.94	19.17	-1323.14	0.41	382031.17	535534.98	N 32 3 0.96	W 104 13 7.10
	8737.00	0.76	19.88	8575.09	-31.89	20.12	-1322.72	0.29	382032.12	535535.40	N 32 3 0.97	W 104 13 7.10
	8832.00	0.60	10.02	8670.09	-32.97	21.20	-1322.42	0.21	382033.20	535535.70	N 32 3 0.98	W 104 13 7.09
	8927.00	0.13	315.54	8765.08	-33.54	21.77	-1322.41	0.56	382033.76	535535.71	N 32 3 0.99	W 104 13 7.09
	9021.00	0.17	214.93	8859.08	-33.50	21.73	-1322.57	0.25	382033.73	535535.55	N 32 3 0.99	W 104 13 7.10
	9116.00	0.73	225.88	8954.08	-32.97	21.19	-1323.08	0.59	382033.19	535535.04	N 32 3 0.98	W 104 13 7.10
	9131.00	0.81	219.05	8969.08	-32.82	21.04	-1323.22	0.81	382033.04	535534.90	N 32 3 0.98	W 104 13 7.10
	9262.00	1.24	179.59	9100.06	-30.69	18.91	-1323.79	0.61	382030.90	535534.33	N 32 3 0.96	W 104 13 7.11
	9310.00	8.48	166.51	9147.86	-26.72	14.94	-1322.96	15.16	382026.94	535535.16	N 32 3 0.92	W 104 13 7.10
	9357.00	15.37	163.79	9193.81	-17.33	5.58	-1320.41	14.70	382017.58	535537.71	N 32 3 0.83	W 104 13 7.07
	9405.00	20.59	173.25	9239.46	-2.80	-8.93	-1317.64	12.43	382003.08	535540.48	N 32 3 0.68	W 104 13 7.04
	9452.00	26.35	176.22	9282.56	15.84	-27.56	-1315.98	12.51	381984.45	535542.14	N 32 3 0.50	W 104 13 7.02
	9500.00	31.77	175.40	9324.50	39.10	-50.80	-1314.26	11.32	381961.21	535543.86	N 32 3 0.27	W 104 13 7.00
	9547.00	36.47	176.34	9363.40	65.40	-77.09	-1312.38	10.06	381934.92	535545.74	N 32 3 0.01	W 104 13 6.98
	9595.00	43.13	177.06	9400.26	96.07	-107.74	-1310.62	13.91	381904.27	535547.50	N 32 2 59.70	W 104 13 6.96
	9642.00	48.16	178.41	9433.10	129.65	-141.31	-1309.31	10.90	381870.70	535548.81	N 32 2 59.37	W 104 13 6.94
	9690.00	51.06	179.52	9464.20	166.21	-177.86	-1308.66	6.29	381834.16	535549.46	N 32 2 59.01	W 104 13 6.94
	9737.00	56.35	182.36	9492.02	204.05	-215.72	-1309.31	12.26	381796.30	535548.81	N 32 2 58.64	W 104 13 6.95
	9785.00	62.16	184.71	9516.55	245.18	-256.87	-1311.88	12.81	381755.16	535546.24	N 32 2 58.23	W 104 13 6.98
	9832.00	65.56	187.95	9537.26	287.06	-298.79	-1316.55	9.52	381713.24	535541.57	N 32 2 57.81	W 104 13 7.03
	9879.00	69.51	191.05	9555.22	329.81	-341.61	-1323.73	10.38	381670.42	535534.39	N 32 2 57.39	W 104 13 7.11
	9926.00	72.78	191.10	9570.41	373.38	-385.25	-1332.27	6.96	381626.78	535525.85	N 32 2 56.96	W 104 13 7.21
	9974.00	75.93	188.71	9583.35	418.83	-430.78	-1340.21	8.13	381581.26	535517.91	N 32 2 56.51	W 104 13 7.31
	10021.00	78.71	186.64	9593.67	464.21	-476.21	-1346.33	7.31	381535.83	535511.79	N 32 2 56.06	W 104 13 7.38
	10069.00	79.14	186.53	9602.89	510.95	-523.01	-1351.74	0.92	381489.04	535506.39	N 32 2 55.60	W 104 13 7.44
Heel HL Cross	10079.00	80.31	186.60	9604.67	520.72	-532.78	-1352.86	11.74	381479.27	535505.26	N 32 2 55.50	W 104 13 7.46
	10164.00	90.28	187.15	9611.63	604.62	-616.78	-1362.99	11.74	381395.28	535495.14	N 32 2 54.67	W 104 13 7.57
	10259.00	92.65	188.53	9609.20	698.58	-710.85	-1375.94	2.89	381301.21	535482.19	N 32 2 53.74	W 104 13 7.73
	10364.00	90.86	187.73	9605.99	802.33	-814.74	-1390.78	1.87	381197.33	535467.35	N 32 2 52.71	W 104 13 7.90
	10479.00	89.93	190.45	9605.20	915.71	-928.28	-1408.95	2.50	381083.80	535449.18	N 32 2 51.59	W 104 13 8.11
	10574.00	91.58	197.16	9603.94	1007.69	-1020.48	-1431.60	7.27	380991.62	535426.53	N 32 2 50.67	W 104 13 8.38
	10763.00	93.03	197.65	9596.34	1187.38	-1200.67	-1488.09	0.81	380811.44	535370.05	N 32 2 48.89	W 104 13 9.03
	10857.00	90.89	193.13	9593.12	1277.70	-1291.22	-1513.01	5.32	380720.90	535345.13	N 32 2 48.00	W 104 13 9.33
	10952.00	91.03	189.28	9591.53	1370.69	-1384.38	-1531.46	4.05	380627.75	535326.68	N 32 2 47.07	W 104 13 9.54
	11047.00	89.55	183.54	9591.05	1464.96	-1478.74	-1542.06	6.24	380533.39	535316.08	N 32 2 46.14	W 104 13 9.67
	11129.00	90.48	180.56	9591.03	1546.87	-1560.68	-1545.00	3.81	380451.46	535313.15	N 32 2 45.33	W 104 13 9.70
	11237.00	90.00	175.47	9590.58	1654.79	-1668.58	-1541.26	4.73	380343.57	535316.88	N 32 2 44.26	W 104 13 9.66
	11332.00	89.72	176.03	9590.81	1749.59	-1763.32	-1534.22	0.66	380248.85	535323.92	N 32 2 43.32	W 104 13 9.58
	11427.00	89.72	178.71	9591.27	1844.51	-1858.21	-1529.86	2.82	380153.96	535328.28	N 32 2 42.38	W 104 13 9.53
	11617.00	93.51	180.68	9585.92	2034.39	-2048.08	-1528.84	2.25	379964.10	535329.30	N 32 2 40.51	W 104 13 9.52
	11712.00	91.52	180.89	9581.75	2129.27	-2142.98	-1530.14	2.11	379869.22	535328.00	N 32 2 39.57	W 104 13 9.53
	11806.00	89.69	179.55	9580.76	2223.25	-2236.97	-1530.50	2.41	379775.24	535327.64	N 32 2 38.64	W 104 13 9.54
	11901.00	90.27	179.89	9580.79	2318.25	-2331.96	-1530.04	0.71	379680.25	535328.10	N 32 2 37.70	W 104 13 9.54
	12091.00	90.69	179.48	9579.20	2508.24	-2521.95	-1529.00	0.31	379490.28	535329.14	N 32 2 35.82	W 104 13 9.53
	12186.00	90.72	179.74	9578.03	2603.24	-2616.94	-1528.35	0.28	379395.29	535329.79	N 32 2 34.88	W 104 13 9.52
	12281.00	90.38	178.20	9577.12	2698.23	-2711.92	-1526.64	1.66	379300.33	535331.50	N 32 2 33.94	W 104 13 9.50
	12376.00	91.24	176.21	9575.77	2793.14	-2806.79	-1522.01	2.28	379205.46	535336.13	N 32 2 33.00	W 104 13 9.45
	12470.00	91.34	176.21	9573.66	2886.96	-2900.56	-1515.80	0.11	379111.70	535342.34	N 32 2 32.07	W 104 13 9.38
	12566.00	91.96	176.20	9570.89	2982.76	-2996.31	-1509.45	0.65	379015.96	535348.69	N 32 2 31.12	W 104 13 9.30
	12660.00	91.38	176.32	9568.16	3076.57	-3090.07	-1503.32	0.63	378922.21	535354.82	N 32 2 30.19	W 104 13 9.23
	12755.00	91.34	178.90	9565.90	3171.48	-3184.96	-1499.36	2.72	378827.34	535358.78	N 32 2 29.25	W 104 13 9.19
	12849.00	89.93	179.95	9564.86	3265.47	-3278.94	-1498.41	1.87	378733.36	535359.72	N 32 2 28.32	W 104 13 9.18
	13039.00	89.79	178.60	9565.32	3455.47	-3468.92	-1496.01	0.71	378543.40	535362.13	N 32 2 26.44	W 104 13 9.15
	13134.00	92.85	179.24	9563.13	3550.43	-3563.87	-1494.22	3.29	378448.46	535363.92	N 32 2 25.51	W 104 13 9.14
	13229.00	91.07	179.65	9559.89	3645.37	-3658.80	-1493.30	1.92	378353.53	535364.84	N 32 2 24.57	W 104 13 9.13
	13417.00	90.41	178.69	9557.46	3833.34	-3846.76	-1490.58	0.62	378165.59	535367.56	N 32 2 22.71	W 104 13 9.10
	13608.00	90.41	179.30	9556.09	4024.33	-4037.73	-1487.23	0.32	377974.64	535370.91	N 32 2 20.82	W 104 13 9.06
	13798.00	90.76	180.23	9554.15	4214.32	-4227.72	-1486.45	0.52	377784.67	535371.69	N 32 2 18.94	W 104 13 9.05
	13893.00	90.14	179.68	9553.40	4309.31	-4322.71	-1486.37	0.87	377689.68	535371.76	N 32 2 18.00	W 104 13 9.05
	13988.00	90.34	179.67	9553.01	4404.31	-4417.71	-1485.84	0.21	377594.69	535372.30	N 32 2 17.06	W 104 13 9.05
	14083.00	90.52	178.34	9552.29	4499.30	-4512.69	-1484.19	1.41	377499.72	535373.95	N 32 2 16.12	W 104 13 9.03
	14273.00	90.65	176.34	9550.35	4689.15	-4702.47	-1475.37	1.05	377309.96	535382.77	N 32 2 14.24	W 104 13 8.93
	14368.00	92.79	177.75	9547.50	4784.01	-4797.29	-1470.47	2.70	377215.15	535387.66	N 32 2 13.30	W 104 13 8.87
	14463.00	90.52	178.05	9544.76	4878.93	-4892.18	-1466.99	2.41	377120.27	535391.14	N 32 2 12.36	W 104 13 8.84
	14558.00	89.86	178.11	9544.44	4973.90	-4987.13	-1463.81	0.70	377025.33	535394.32	N 32 2 11.42	W 104 13 8.80
	14653.00	89.67	178.63	9544.58	5068.88	-5082.09	-1461.11	0.56	376930.38	535397.02	N 32 2 10.48	W 104 13 8.77
	14748.00	87.49	178.23	9546.69	5163.83	-5177.0						

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 ° ' ")
	18540.00	89.59	179.74	9569.20	8953.90	-8967.07	-1439.49	0.41	373045.75	535418.64	N 32 1 32.04	W 104 13 8.57
	18635.00	91.48	180.46	9568.31	9048.88	-9062.06	-1439.66	2.13	372950.77	535418.48	N 32 1 31.10	W 104 13 8.57
	18730.00	91.48	180.40	9565.86	9143.84	-9157.02	-1440.37	0.06	372855.81	535417.76	N 32 1 30.16	W 104 13 8.58
	18825.00	91.48	180.11	9563.41	9238.80	-9251.99	-1440.79	0.31	372760.86	535417.34	N 32 1 29.22	W 104 13 8.58
	18919.00	92.10	179.43	9560.47	9332.75	-9345.94	-1440.41	0.98	372666.91	535417.72	N 32 1 28.29	W 104 13 8.58
	19014.00	91.79	178.05	9557.24	9427.68	-9440.86	-1438.33	1.49	372572.00	535419.80	N 32 1 27.35	W 104 13 8.56
	19109.00	88.62	178.07	9556.90	9522.64	-9535.79	-1435.11	3.34	372477.08	535423.02	N 32 1 26.41	W 104 13 8.52
	19204.00	89.04	179.38	9558.84	9617.61	-9630.75	-1433.00	1.45	372382.13	535425.13	N 32 1 25.47	W 104 13 8.50
	19299.00	89.17	179.38	9560.33	9712.60	-9725.73	-1431.97	0.14	372287.16	535426.16	N 32 1 24.53	W 104 13 8.49
	19393.00	89.72	181.45	9561.24	9806.58	-9819.72	-1432.65	2.28	372193.18	535425.48	N 32 1 23.60	W 104 13 8.50
	19488.00	90.17	182.42	9561.33	9901.49	-9914.66	-1435.86	1.13	372098.24	535422.27	N 32 1 22.66	W 104 13 8.54
	19676.00	89.42	179.82	9562.00	10089.40	-10102.61	-1439.53	1.44	371910.31	535418.60	N 32 1 20.80	W 104 13 8.58
	19866.00	89.48	178.19	9563.83	10279.37	-10292.56	-1436.23	0.86	371720.38	535421.90	N 32 1 18.92	W 104 13 8.54
	20056.00	89.76	178.55	9565.09	10469.33	-10482.48	-1430.83	0.24	371530.47	535427.30	N 32 1 17.04	W 104 13 8.48
Toe HL Cross	20106.00	90.20	179.35	9565.10	10519.33	-10532.47	-1429.91	1.82	371480.49	535428.22	N 32 1 16.54	W 104 13 8.47
Last SLB MWD Survey	20137.00	90.48	179.84	9564.92	10550.33	-10563.47	-1429.69	1.82	371449.49	535428.44	N 32 1 16.24	W 104 13 8.47
Projection to Bit	20181.00	90.48	179.84	9564.55	10594.33	-10607.47	-1429.57	0.00	371405.50	535428.56	N 32 1 15.80	W 104 13 8.47

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	28.000	1/98.425	30.000	30.000	B001Ma_MWD+HDGM-Depth Only	HH SO 17 20 Fed 001 No. 6H / Chevron HH SO 17 20 Fed 001 No. 6H MWD to 20181ft
	1	28.000	28.000	Act Stns	30.000	30.000	B001Ma_MWD+HDGM-Depth Only	HH SO 17 20 Fed 001 No. 6H / Chevron HH SO 17 20 Fed 001 No. 6H MWD to 20181ft
	1	28.000	20181.000	Act Stns	30.000	30.000	B001Ma_MWD+HDGM	HH SO 17 20 Fed 001 No. 6H / Chevron HH SO 17 20 Fed 001