

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

EMNRD-OCD ARTESIA Form C-102
REC'D: 4/27/2020 Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT
"As-Drilled"

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45420	² Pool Code 13367	³ Pool Name COTTON DRAW;BONE SPRING
⁴ Property Code 322857	⁵ Property Name SND 12 01 FED 003	⁶ Well Number 1H
⁷ OGRID No. 4323	⁸ Operator Name CHEVRON U.S.A. INC.	⁹ Elevation 3580'

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
P	12	24 SOUTH	31 EAST, N.M.P.M.		367'	SOUTH	1210'	EAST	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
A	1	24 SOUTH	31 EAST, N.M.P.M.		25'	NORTH	346'	EAST	EDDY

¹² Dedicated Acres 320	¹³ Joint or Infill Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-20250
--------------------------------------	---	----------------------------------	------------------------------------

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 <table border="1"> <tr> <td>SND 12 01 FED 003 NO. 1H WELL</td> <td>FINAL KICK OFF POINT</td> </tr> <tr> <td>X= 687,680' Y= 446,291' LAT. 32.225514° N LONG. 103.726418° W</td> <td>X= 688,061' Y= 445,975' LAT. 32.224641° N LONG. 103.725192° W</td> </tr> <tr> <td>X= 728,864' Y= 446,350' LAT. 32.225638° N LONG. 103.726901° W</td> <td>X= 729,245' Y= 446,034' LAT. 32.224764° N LONG. 103.725675° W</td> </tr> <tr> <td colspan="2">ELEVATION +3580' NAVD 88</td> </tr> <tr> <td>FINAL FIRST TAKE POINT</td> <td>FINAL LAST TAKE POINT</td> </tr> <tr> <td>X= 688,437' Y= 446,221' LAT. 32.225310° N LONG. 103.723971° W</td> <td>X= 688,494' Y= 456,312' LAT. 32.253048° N LONG. 103.723604° W</td> </tr> <tr> <td>X= 729,621' Y= 446,280' LAT. 32.225433° N LONG. 103.724453° W</td> <td>X= 729,677' Y= 456,371' LAT. 32.253171° N LONG. 103.724088° W</td> </tr> <tr> <td colspan="2">AS-DRILLED BOTTOM HOLE LOCATION</td> </tr> <tr> <td>X= 688,490' Y= 456,468' LAT. 32.253477° N LONG. 103.723614° W</td> <td></td> </tr> <tr> <td>X= 729,673' Y= 456,527' LAT. 32.253600° N LONG. 103.724098° W</td> <td></td> </tr> </table> CORNER COORDINATES TABLE (NAD 27) A - Y=456465.72, X=683556.77 B - Y=456487.58, X=687515.39 C - Y=456494.87, X=688834.92 D - Y=445905.30, X=683610.86 E - Y=445923.64, X=687571.75 F - Y=445929.75, X=688892.05	SND 12 01 FED 003 NO. 1H WELL	FINAL KICK OFF POINT	X= 687,680' Y= 446,291' LAT. 32.225514° N LONG. 103.726418° W	X= 688,061' Y= 445,975' LAT. 32.224641° N LONG. 103.725192° W	X= 728,864' Y= 446,350' LAT. 32.225638° N LONG. 103.726901° W	X= 729,245' Y= 446,034' LAT. 32.224764° N LONG. 103.725675° W	ELEVATION +3580' NAVD 88		FINAL FIRST TAKE POINT	FINAL LAST TAKE POINT	X= 688,437' Y= 446,221' LAT. 32.225310° N LONG. 103.723971° W	X= 688,494' Y= 456,312' LAT. 32.253048° N LONG. 103.723604° W	X= 729,621' Y= 446,280' LAT. 32.225433° N LONG. 103.724453° W	X= 729,677' Y= 456,371' LAT. 32.253171° N LONG. 103.724088° W	AS-DRILLED BOTTOM HOLE LOCATION		X= 688,490' Y= 456,468' LAT. 32.253477° N LONG. 103.723614° W		X= 729,673' Y= 456,527' LAT. 32.253600° N LONG. 103.724098° W		Final Last Take Point at 19,357' MD 180.54' FNL, 342.29' FEL Final First Take Point at 9,208' MD 293.51' FSL, 453.13' FEL Final Kick Off Point at 8,444' MD 49.59 FSL, 830.77' FEL	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. Signature: <i>[Signature]</i> Date: 4/16/2020 Printed Name: Laura Becerra E-mail Address: LBecerra@Chevron.com 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. Date of Survey: 07/31/2017 Signature and Seal of Professional Surveyor: <i>[Signature]</i> Certificate Number: 23006 03/06/2020
SND 12 01 FED 003 NO. 1H WELL	FINAL KICK OFF POINT																					
X= 687,680' Y= 446,291' LAT. 32.225514° N LONG. 103.726418° W	X= 688,061' Y= 445,975' LAT. 32.224641° N LONG. 103.725192° W																					
X= 728,864' Y= 446,350' LAT. 32.225638° N LONG. 103.726901° W	X= 729,245' Y= 446,034' LAT. 32.224764° N LONG. 103.725675° W																					
ELEVATION +3580' NAVD 88																						
FINAL FIRST TAKE POINT	FINAL LAST TAKE POINT																					
X= 688,437' Y= 446,221' LAT. 32.225310° N LONG. 103.723971° W	X= 688,494' Y= 456,312' LAT. 32.253048° N LONG. 103.723604° W																					
X= 729,621' Y= 446,280' LAT. 32.225433° N LONG. 103.724453° W	X= 729,677' Y= 456,371' LAT. 32.253171° N LONG. 103.724088° W																					
AS-DRILLED BOTTOM HOLE LOCATION																						
X= 688,490' Y= 456,468' LAT. 32.253477° N LONG. 103.723614° W																						
X= 729,673' Y= 456,527' LAT. 32.253600° N LONG. 103.724098° W																						

Intent ☐ As Drilled ☒

API # 30-015-45420			
Operator Name: CHEVRON USA INC		Property Name: SND 12 01 FED 003	Well Number 1H

Kick Off Point (KOP)

UL P	Section 12	Township 24S	Range 31E	Lot	Feet 50	From N/S FSL	Feet 831	From E/W FEL	County EDDY
Latitude 32.224764					Longitude 103.725675				NAD NAD 83/86

First Take Point (FTP)

UL P	Section 12	Township 24S	Range 31E	Lot	Feet 294	From N/S FSL	Feet 453	From E/W FEL	County EDDY
Latitude 32.225433					Longitude 103.724453				NAD NAD 83/86

Last Take Point (LTP)

UL A	Section 1	Township 24S	Range 31E	Lot	Feet 181	From N/S FNL	Feet 342	From E/W FEL	County EDDY
Latitude 32.253171					Longitude 103.724088				NAD NAD 86/86

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 # 30-015-45421			
Operator Name: CHEVRON USA INC		Property Name: SND 12 01 FED 003	Well Number 2H

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)



August 20, 2019

Chevron USA Incorporated
6301 Deauville Blvd.
Midland TX 79706

Re:

S12, T24S, R31E Eddy, NM
N 32.225638 W -103.72600001

CLIENT: Chevron USA Incorporated
WELL: SND 12 01 Fed 003 1H
FIELD: Wildcat

RIG: Patterson 816
COUNTY: Eddy
API NO: 30-015-45420
JOB NO: 19MLI0232

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>
Jonathan Burns FS	SND 12 01 Fed 003 1H Original Hole	970.00 Ft to 19474.00 Ft	July 15, 2019 to August 11, 2019	SlimPulse

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)



Well Reference:
S12, T24S, R31E Eddy, NM
N 32.225638 W -103.72600001

I, Jonathan Burns certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of July 15, 2019 through August 11, 2019, conduct or supervise the taking of the SlimPulse surveys from a depth of 970.00 feet to a depth of 19474.00 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 SND 12 01 Fed 003 1H Well (Original Hole) API No. 30-015-45420 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
Jonathan Burns
FS

Subscribed and Sworn to before me this 21 day of August (month) 2019 (yr)

My Commission expires:

6/14/2023

Jean-Paul Langlois

(signature)

Notary Public

Comanche, Oklahoma

(County State)





Chevron SND 12 01 FED 003 1H MWD+DMAG to 19513ft Survey Geodetic Report (Def Survey)



Report Date: August 12, 2019 - 04:21 PM
Client: Chevron
Field: NM Eddy County (NAD 27)
Structure / Slot: Chevron SND 12 01 FED 003 Pad / 1H
Well: SND 12 01 FED 003 1H
Borehole: SND 12 01 FED 003 1H
UWI / API#: Unknown / 30-015-45420
Survey Name: Chevron SND 12 01 FED 003 1H MWD+DMAG to 19513ft
Survey Date: August 12, 2019
Tort / AHD / DDI / ERD Ratio: 284.465 ° / 11275.060 ft / 6.837 / 1.237
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 31.84994", W 103° 43' 35.10625"
Location Grid N/E Y/X: N 446291.000 ftUS, E 687680.000 ftUS
CRS Grid Convergence Angle: 0.3236 °
Grid Scale Factor: 0.99994943
Version / Patch: 2.10.760.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.690 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB = 28ft
TVD Reference Elevation: 3608.000 ft above MSL
Seabed / Ground Elevation: 3580.000 ft above MSL
Magnetic Declination: 6.711 °
Total Gravity Field Strength: 998.4297mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47885.516 nT
Magnetic Dip Angle: 59.891 °
Declination Date: August 12, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3236 °
Total Corr Mag North->Grid North: 6.3877 °
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	446291.00	687680.00	N 32 13 31.85	W 103 43 35.11
Adjusted KB	28.00	0.00	0.00	28.00	0.00	0.00	0.00	0.00	446291.00	687680.00	N 32 13 31.85	W 103 43 35.11
First 3rd Party Survey	166.90	0.30	117.50	166.90	-0.17	-0.17	0.32	0.22	446290.83	687680.32	N 32 13 31.85	W 103 43 35.10
	259.90	0.10	169.50	259.90	-0.36	-0.36	0.55	0.27	446290.64	687680.55	N 32 13 31.85	W 103 43 35.10
	352.90	0.60	294.50	352.90	-0.24	-0.24	0.12	0.71	446290.76	687680.12	N 32 13 31.85	W 103 43 35.10
	445.90	0.20	91.50	445.90	-0.04	-0.04	-0.16	0.85	446290.96	687679.84	N 32 13 31.85	W 103 43 35.11
	540.90	0.80	225.50	540.89	-0.51	-0.51	-0.46	1.00	446290.49	687679.54	N 32 13 31.84	W 103 43 35.11
	633.90	0.60	227.50	633.89	-1.29	-1.29	-1.29	0.22	446289.71	687678.71	N 32 13 31.84	W 103 43 35.12
	727.90	0.60	185.50	727.88	-2.11	-2.12	-1.70	0.46	446288.88	687678.30	N 32 13 31.83	W 103 43 35.13
	821.90	0.80	195.50	821.87	-3.23	-3.24	-1.92	0.25	446287.76	687678.08	N 32 13 31.82	W 103 43 35.13
Last 3rd Party Survey	970.00	1.49	233.89	969.95	-5.35	-5.37	-3.75	0.67	446285.63	687676.25	N 32 13 31.80	W 103 43 35.15
	1066.00	1.19	232.97	1065.92	-6.68	-6.71	-5.55	0.31	446284.30	687674.45	N 32 13 31.78	W 103 43 35.17
First SLB MWD Survey	1161.00	1.40	227.88	1160.90	-8.04	-8.08	-7.20	0.25	446282.92	687672.80	N 32 13 31.77	W 103 43 35.19
	1256.00	0.76	251.84	1255.88	-9.01	-9.05	-8.66	0.81	446281.95	687671.34	N 32 13 31.76	W 103 43 35.21
	1352.00	0.62	9.19	1351.87	-8.69	-8.74	-9.18	1.23	446282.26	687670.82	N 32 13 31.76	W 103 43 35.21
	1447.00	1.03	30.81	1446.86	-7.45	-7.50	-8.66	0.53	446283.50	687671.34	N 32 13 31.78	W 103 43 35.21
	1542.00	0.72	20.42	1541.85	-6.16	-6.20	-8.02	0.37	446284.80	687671.98	N 32 13 31.79	W 103 43 35.20
	1638.00	0.67	6.57	1637.85	-5.04	-5.08	-7.74	0.18	446285.92	687672.26	N 32 13 31.80	W 103 43 35.20
	1733.00	0.74	358.19	1732.84	-3.88	-3.92	-7.70	0.13	446287.08	687672.30	N 32 13 31.81	W 103 43 35.20
	1829.00	0.70	40.64	1828.83	-2.81	-2.85	-7.34	0.54	446288.15	687672.66	N 32 13 31.82	W 103 43 35.19
	1924.00	0.94	53.07	1923.82	-1.91	-1.94	-6.34	0.31	446289.06	687673.66	N 32 13 31.83	W 103 43 35.18
	2020.00	0.86	50.74	2019.81	-0.99	-1.01	-5.15	0.09	446289.99	687674.85	N 32 13 31.84	W 103 43 35.17
	2116.00	1.02	41.00	2115.80	0.11	0.09	-4.03	0.23	446291.09	687675.97	N 32 13 31.85	W 103 43 35.15
	2210.00	1.03	46.65	2209.78	1.31	1.30	-2.87	0.11	446292.30	687677.13	N 32 13 31.86	W 103 43 35.14
	2305.00	0.94	28.18	2304.77	2.58	2.57	-1.88	0.35	446293.57	687678.12	N 32 13 31.88	W 103 43 35.13
	2401.00	1.13	74.46	2400.76	3.52	3.52	-0.59	0.87	446294.52	687679.41	N 32 13 31.88	W 103 43 35.11
	2496.00	1.25	104.37	2495.74	3.51	3.51	1.31	0.66	446294.51	687681.31	N 32 13 31.88	W 103 43 35.09
	2591.00	0.32	177.70	2590.73	2.98	2.99	2.33	1.26	446293.99	687682.33	N 32 13 31.88	W 103 43 35.08
	2687.00	0.25	153.21	2686.73	2.52	2.54	2.43	0.14	446293.53	687682.43	N 32 13 31.87	W 103 43 35.08
	2782.00	0.48	89.70	2781.72	2.34	2.35	2.92	0.45	446293.35	687682.92	N 32 13 31.87	W 103 43 35.07
	2877.00	1.03	113.85	2876.72	1.99	2.01	4.10	0.66	446293.01	687684.10	N 32 13 31.87	W 103 43 35.06
	2971.00	1.29	145.39	2970.70	0.77	0.80	5.48	0.72	446291.80	687685.47	N 32 13 31.86	W 103 43 35.04
	3066.00	1.36	151.33	3065.67	-1.11	-1.07	6.62	0.16	446289.93	687686.62	N 32 13 31.84	W 103 43 35.03
	3162.00	1.20	155.01	3161.65	-3.02	-2.98	7.59	0.19	446288.02	687687.59	N 32 13 31.82	W 103 43 35.02
	3258.00	0.80	134.04	3257.63	-4.41	-4.36	8.50	0.56	446286.64	687688.50	N 32 13 31.81	W 103 43 35.01
	3353.00	0.95	137.63	3352.62	-5.45	-5.40	9.51	0.17	446285.60	687689.51	N 32 13 31.80	W 103 43 35.00
	3448.00	0.65	135.43	3447.61	-6.43	-6.37	10.42	0.32	446284.63	687690.42	N 32 13 31.79	W 103 43 34.99
	3540.00	0.41	125.92	3539.61	-6.99	-6.93	11.05	0.28	446284.07	687691.05	N 32 13 31.78	W 103 43 34.98
	3639.00	0.94	113.07	3638.60	-7.53	-7.46	12.08	0.55	446283.54	687692.08	N 32 13 31.78	W 103 43 34.97
	3734.00	2.07	131.02	3733.57	-8.97	-8.89	14.10	1.27	446282.11	687694.09	N 32 13 31.76	W 103 43 34.94
	3829.00	3.18	129.60	3828.47	-11.79	-11.70	17.42	1.17	446279.30	687697.42	N 32 13 31.73	W 103 43 34.90
	3925.00	4.72	124.70	3924.24	-15.77	-15.64	22.72	1.64	446275.36	687702.72	N 32 13 31.69	W 103 43 34.84
	4020.00	7.48	128.18	4018.69	-21.86	-21.69	30.80	2.93	446269.31	687710.79	N 32 13 31.63	W 103 43 34.75
	4115.00	7.40	131.04	4112.89	-29.75	-29.53	40.27	0.40	446261.47	687720.27	N 32 13 31.56	W 103 43 34.64
	4211.00	6.80	134.50	4208.15	-37.84	-37.57	48.99	0.77	446253.43	687728.98	N 32 13 31.48	W 103 43 34.54
	4307.00	7.21	137.83	4303.44	-46.33	-46.02	57.09	0.60	446244.98	687737.08	N 32 13 31.39	W 103 43 34.44
	4402.00	6.15	139.21	4397.79	-54.64	-54.29	64.41	1.13	446236.71	687744.41	N 32 13 31.31	W 103 43 34.36
	4498.00	5.44	135.08	4493.30	-61.79	-61.41	70.98	0.86	446229.59	687750.98	N 32 13 31.24	W 103 43 34.28
	4567.00	5.20	129.25	4562.00	-66.11	-65.70	75.72	0.86	446225.30	687755.71	N 32 13 31.20	W 103 43 34.23
	4703.00	5.04	125.83	4697.46	-73.56	-73.10	85.33	0.25	446217.90	687765.33	N 32 13 31.12	W 103 43 34.12
4798.00	6.71	128.83	4791.96	-79.53	-79.02	93.04	1.79	446211.98	687773.03	N 32 13 31.06	W 103 43 34.03	
4893.00	7.35	130.15	4886.24	-86.97	-86.42	102.01	0.69	446204.58	687782.00	N 32 13 30.99	W 103 43 33.92	
4989.00	7.62	129.76	4981.43	-95.05	-94.45	111.59	0.29	446196.55	687791.59	N 32 13 30.91	W 103 43 33.81	
5084.00	7.54	128.81	5075.60	-103.04	-102.39	121.29	0.16	446188.62	687801.29	N 32 13 30.83	W 103 43 33.70	
5180.00	7.73	127.56	5170.75	-110.98	-110.27	131.32	0.26	446180.74	687811.31	N 32 13 30.75	W 103 43 33.58	
5275.00	6.68	128.06	5264.99	-118.33	-117.57	140.73	1.11	446173.44	687820.73	N 32 13 30.68	W 103 43 33.48	
5370.00	6.51	127.76	5359.37	-125.08	-124.28	149.34	0.18	446166.73	687829.33	N 32 13 30.61	W 103 43 33.38	
5465.00	6.19	125.97	5453.78	-131.43	-130.58	157.75	0.40	446160.43	687837.74	N 32 13 30.55	W 103 43 33.28	
5560.00	5.78	125.94	5548.26	-137.29	-136.40	165.76	0.43	446154.61	687845.75	N 32 13 30.49	W 103 43 33.19	
5655.00	7.04	125.14	5642.67	-143.50	-142.56	174.40	1.33	446148.45	687854.39	N 32 13 30.43	W 103 43 33.09	
5751.00	7.39	122.05	5737.91	-150.21	-149.22	184.44	0.54	446141.79	687864.43	N 32 13 30.36	W 103 43 32.97	
5846.00	7.20	134.04	5832.15	-157.65	-156.60	193.90	1.61	446134.41	687873.89	N 32 13 30.29	W 103 43 32.86	
5941.00	7.59	135.37	5926.35	-166.30	-165.20	202.59	0.45	446125.81	687882.58	N 32 13 30.20	W 103 43 32.76	
6036.00	7.68	134.19	6020.51	-175.23	-174.09	211.55	0.19	446116.92	687891.54	N 32 13 30.12	W 103 43 32.66	
6131.00	7.25	134.82	6114.71	-183.93	-182.74	220.35	0.46	446108.27	687900.34	N 32 13 30.03	W 103 43 32.55	
6226.00	6.65	135.08	6209.01	-192.10	-190.86	228.49	0.63	446100.15	687908.47	N 32 13 29.95	W 103 43 32.46	
6322.00	6.85	135.75	6304.34	-200.18	-198.90	236.41	0.22	446092.11	687916.39	N 32 13 29.87	W 103 43 32.37	
6417.00	7.08	136.28	6398.64	-208.51	-207.19	244.41	0.25	446083.82	687924.39	N 32 13 29.79	W 103 43 32.27	
6512.00	5.64	133.48	6493.06	-215.99	-214.63	251.84	1.55	446076.38	687931.83	N 32 13 29.71	W 103 43 32.19	
6608.00	5.54	133.01	6588.60	-222.44	-221.04	258.65	0.11	446069.97	687938.64	N 32 13 29.65	W 103 43 32.11	
6704.00	5.56	132.47	6684.15	-228.77	-227.34	265.47	0.06	446063.67	687945.46	N 32 13 29.59	W 103 43 32.03	
6800.00	5.05	134.12	6779.74	-234.89	-233.42	271.93	0.55	446057.59	687951.92	N 32 13 29.52	W 103 43 31.96	
6895.00	4.34	132.98	6874.42	-240.28	-238.78	277.57	0.75	446052.23	687957.55	N 32 13 29.47	W 103 43 31.89	
6991.00	4.30	133.47	6970.15	-245.26	-243.74	282.83	0.06	446047.28				

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 ° ' ")
	7086.00	4.16	132.23	7064.89	-250.06	-248.50	287.97	0.18	446042.51	687967.96	N 32 13 29.37	W 103 43 31.77
	7182.00	3.88	132.49	7160.65	-254.62	-253.04	292.94	0.29	446037.98	687972.93	N 32 13 29.33	W 103 43 31.71
	7278.00	5.15	131.12	7256.35	-259.68	-258.06	298.59	1.33	446032.95	687978.57	N 32 13 29.28	W 103 43 31.65
	7373.00	5.55	128.95	7350.94	-265.41	-263.76	305.37	0.47	446027.26	687985.35	N 32 13 29.22	W 103 43 31.57
	7469.00	5.48	129.80	7446.49	-271.30	-269.61	312.50	0.11	446021.40	687992.49	N 32 13 29.16	W 103 43 31.49
	7565.00	5.35	129.63	7542.06	-277.12	-275.40	319.47	0.14	446015.62	687999.45	N 32 13 29.11	W 103 43 31.41
	7661.00	5.24	129.47	7637.65	-282.80	-281.04	326.30	0.12	446009.98	688006.28	N 32 13 29.05	W 103 43 31.33
	7756.00	5.05	130.29	7732.27	-288.30	-286.50	332.84	0.21	446004.51	688012.82	N 32 13 29.00	W 103 43 31.25
	7852.00	4.77	133.30	7827.92	-293.80	-291.97	338.97	0.40	445999.04	688018.95	N 32 13 28.94	W 103 43 31.18
	7948.00	4.54	132.28	7923.60	-299.12	-297.26	344.68	0.25	445993.75	688024.67	N 32 13 28.89	W 103 43 31.11
	8044.00	4.84	117.41	8019.28	-303.58	-301.68	351.09	1.30	445989.33	688031.07	N 32 13 28.85	W 103 43 31.04
	8139.00	4.81	117.09	8113.95	-307.28	-305.34	358.19	0.04	445985.67	688038.18	N 32 13 28.81	W 103 43 30.96
	8235.00	4.30	117.08	8209.64	-310.78	-308.81	364.98	0.53	445982.20	688044.96	N 32 13 28.77	W 103 43 30.88
	8331.00	4.23	119.37	8305.38	-314.19	-312.19	371.27	0.19	445978.83	688051.25	N 32 13 28.74	W 103 43 30.81
	8383.00	4.06	119.20	8357.24	-316.05	-314.03	374.55	0.33	445976.99	688054.53	N 32 13 28.72	W 103 43 30.77
	8478.00	8.68	97.96	8451.64	-318.74	-316.66	384.59	5.38	445974.35	688064.57	N 32 13 28.69	W 103 43 30.65
	8525.00	13.62	92.94	8497.74	-319.56	-317.44	393.64	10.70	445973.58	688073.62	N 32 13 28.69	W 103 43 30.55
First DMAG Correction	8574.00	18.17	85.74	8544.86	-319.36	-317.17	407.03	10.10	445973.85	688087.00	N 32 13 28.69	W 103 43 30.39
	8621.00	22.64	77.85	8588.91	-317.00	-314.72	423.19	11.15	445976.30	688103.17	N 32 13 28.71	W 103 43 30.20
	8670.00	27.23	69.59	8633.34	-311.21	-308.82	442.93	11.74	445982.20	688122.91	N 32 13 28.77	W 103 43 29.97
	8717.00	32.30	64.49	8674.13	-302.16	-299.65	464.36	12.05	445991.36	688144.33	N 32 13 28.86	W 103 43 29.72
	8765.00	36.81	61.66	8713.66	-289.94	-287.30	488.60	9.97	446003.72	688168.58	N 32 13 28.98	W 103 43 29.44
Heel HL Cross	8812.00	41.34	59.02	8750.14	-275.39	-272.61	514.32	10.27	446018.40	688194.29	N 32 13 29.12	W 103 43 29.14
	8836.00	43.55	58.04	8767.85	-267.01	-264.16	528.13	9.61	446026.86	688208.10	N 32 13 29.21	W 103 43 28.98
	8861.00	45.86	57.11	8785.62	-257.66	-254.73	542.97	9.61	446036.29	688222.95	N 32 13 29.30	W 103 43 28.80
	8908.00	49.88	57.05	8817.14	-238.88	-235.79	572.23	8.55	446055.23	688252.20	N 32 13 29.48	W 103 43 28.46
	8957.00	53.99	54.95	8847.34	-217.47	-214.20	604.19	9.04	446076.81	688284.16	N 32 13 29.70	W 103 43 28.09
	9004.00	55.33	52.36	8874.53	-194.91	-191.48	635.06	5.32	446099.53	688315.03	N 32 13 29.92	W 103 43 27.73
	9052.00	56.73	49.25	8901.36	-169.92	-166.32	665.90	6.11	446124.69	688345.86	N 32 13 30.17	W 103 43 27.37
	9099.00	57.45	45.74	8926.90	-143.42	-139.66	694.98	6.45	446151.34	688374.94	N 32 13 30.43	W 103 43 27.03
	9148.00	58.86	42.68	8952.76	-113.74	-109.83	723.99	6.03	446181.18	688403.95	N 32 13 30.72	W 103 43 26.69
	9195.00	60.20	39.06	8976.59	-83.26	-79.20	750.48	7.22	446211.81	688430.44	N 32 13 31.02	W 103 43 26.38
	9243.00	62.22	34.16	8999.72	-49.63	-45.44	775.54	9.89	446245.56	688455.50	N 32 13 31.36	W 103 43 26.08
	9290.00	65.01	29.52	9020.62	-13.99	-9.68	797.73	10.65	446281.32	688477.69	N 32 13 31.71	W 103 43 25.82
	9339.00	68.01	25.62	9040.15	25.73	30.15	818.50	9.53	446321.15	688498.46	N 32 13 32.10	W 103 43 25.58
	9386.00	71.06	22.04	9056.59	65.90	70.43	836.28	9.64	446361.42	688516.23	N 32 13 32.50	W 103 43 25.37
	9435.00	74.87	18.36	9070.94	109.77	114.38	852.43	10.58	446405.38	688532.39	N 32 13 32.93	W 103 43 25.18
	9482.00	76.03	12.23	9082.76	153.56	158.24	864.42	12.86	446449.23	688544.37	N 32 13 33.37	W 103 43 25.03
	9530.00	77.25	6.98	9093.86	199.55	204.27	872.20	10.94	446495.26	688552.16	N 32 13 33.82	W 103 43 24.94
	9577.00	80.79	3.66	9102.81	245.45	250.20	876.47	10.24	446541.18	688556.43	N 32 13 34.28	W 103 43 24.89
	9626.00	86.37	3.67	9108.29	294.01	298.77	879.58	11.39	446589.76	688559.54	N 32 13 34.76	W 103 43 24.85
	9720.00	91.42	4.77	9110.10	387.67	392.47	886.50	5.50	446683.45	688566.45	N 32 13 35.68	W 103 43 24.76
	9816.00	89.96	4.39	9108.94	483.31	488.15	894.16	1.57	446779.13	688574.12	N 32 13 36.63	W 103 43 24.67
	9890.00	90.48	3.90	9108.66	557.08	561.96	899.51	0.97	446852.93	688579.46	N 32 13 37.36	W 103 43 24.60
	9986.00	92.93	358.46	9105.80	652.96	657.85	901.49	6.21	446948.82	688581.44	N 32 13 38.31	W 103 43 24.57
	10082.00	93.55	354.22	9100.37	748.62	753.48	895.37	4.46	447044.44	688575.33	N 32 13 39.26	W 103 43 24.63
	10177.00	90.10	349.81	9097.35	842.69	847.47	882.19	5.89	447138.43	688562.14	N 32 13 40.19	W 103 43 24.78
	10273.00	88.38	351.74	9098.62	937.51	942.21	866.80	2.69	447233.16	688546.75	N 32 13 41.12	W 103 43 24.95
	10367.00	87.42	356.44	9102.07	1030.97	1035.62	857.13	5.10	447326.57	688537.08	N 32 13 42.05	W 103 43 25.06
	10461.00	85.73	1.38	9107.69	1124.76	1129.41	855.34	5.55	447420.35	688535.29	N 32 13 42.98	W 103 43 25.08
	10555.00	88.49	4.03	9112.43	1218.50	1223.17	859.77	4.07	447514.10	688539.73	N 32 13 43.91	W 103 43 25.02
	10649.00	89.73	7.09	9113.89	1311.98	1316.70	868.88	3.51	447607.63	688548.83	N 32 13 44.83	W 103 43 24.91
	10743.00	89.28	5.11	9114.70	1405.38	1410.16	878.87	2.16	447701.08	688558.82	N 32 13 45.75	W 103 43 24.78
	10838.00	90.04	2.04	9115.26	1500.15	1504.96	884.79	3.33	447795.88	688564.74	N 32 13 46.69	W 103 43 24.71
	10933.00	90.18	1.69	9115.08	1595.08	1599.91	887.88	0.40	447890.82	688567.83	N 32 13 47.63	W 103 43 24.67
Last DMAG Correction	11028.00	88.87	2.20	9115.87	1690.00	1694.85	891.10	1.48	447985.76	688571.06	N 32 13 48.57	W 103 43 24.62
	11122.00	91.14	2.65	9115.86	1783.89	1788.76	895.08	2.46	448079.66	688575.03	N 32 13 49.50	W 103 43 24.57
	11311.00	90.79	357.27	9112.67	1972.79	1977.66	894.95	2.85	448268.56	688574.90	N 32 13 51.37	W 103 43 24.56
	11407.00	90.82	357.04	9111.33	2068.69	2073.53	890.18	0.24	448364.42	688570.14	N 32 13 52.32	W 103 43 24.61
	11502.00	90.14	356.62	9110.53	2163.56	2168.38	884.93	0.84	448459.27	688564.88	N 32 13 53.26	W 103 43 24.66
	11598.00	90.38	357.29	9110.09	2259.45	2264.25	879.83	0.74	448555.13	688559.79	N 32 13 54.21	W 103 43 24.72
	11693.00	90.07	1.77	9109.72	2354.43	2359.22	879.05	4.73	448650.09	688559.01	N 32 13 55.15	W 103 43 24.72
	11884.00	90.24	1.48	9109.20	2545.32	2550.14	884.47	0.18	448841.01	688564.42	N 32 13 57.03	W 103 43 24.64
	11980.00	90.62	359.72	9108.48	2641.30	2646.13	885.47	1.88	448936.99	688565.43	N 32 13 57.98	W 103 43 24.62
	12019.00	90.62	359.72	9108.06	2680.30	2685.13	885.28	0.00	448975.98	688565.24	N 32 13 58.37	W 103 43 24.62
	12170.00	90.28	357.49	9106.88	2831.26	2836.07	881.61	1.49	449126.92	688561.56	N 32 13 59.86	W 103 43 24.66
	12266.00	90.59	357.82	9106.15	2927.19	2931.98	877.68	0.47	449222.83	688557.63	N 32 14 0.81	W 103 43 24.70
	12457.00	90.48	357.14	9104.36	3118.04	3122.79	869.28	0.36	449413.63	688549.24	N 32 14 2.70	W 103 43 24.78
	12552.00	90.62	357.94	9103.45	3212.97	3217.70	865.20	0.85	449508.53	688545.16	N 32 14 3.64	W 103 43 24.82
	12743.00	90.24	359.12	9102.02	3403.92	3408.62	860.31	0.65	449699.45	688540.26	N 32 14 5.53	W 103 43 24.87
	12934.00	90.03	359.89	9101.57	3594.92	3599.62	858.66	0.42	449890.43	688538.61	N 32 14 7.42	W 103 43 24.87
	13029.00	90.62	359.69	9101.03	3689.91	3694.61	858.31	0.66	449985.42	688538.26	N 32 14 8.36	W 103 43 24.87
	13220.00	90.55	359.02	9099.08	3880.90	3885.59	856.16	0.35	450176.39	688536.11	N 32 14 10.25	W 103 43 24.88
	13316.00	90.76	359.04	9097.98	3976.89	3981.57	854.53	0.22	450272.36	688534.49	N 32 14 11.20	W 103 43 24.90
	13507.00	90.83	0.03	9095.33	4167.87	4172.54	852.98	0.52	450463.32	688532.94	N 32 14 13.09	W 103 43 24.90
	13602.00	90.65	358.73	9094.10	4262.85	4267.53	851.95	1.38	450558.30	688531.91	N 32 14 14.03	W 103 43 24.91
	13698.00	90.										

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 ° ' ")
	17043.00	89.83	356.59	9087.24	7702.94	7707.57	835.38	2.06	453998.16	688515.34	N 32 14 48.07	W 103 43 24.87
	17139.00	89.52	358.38	9087.78	7798.86	7803.47	831.17	1.89	454094.06	688511.12	N 32 14 49.02	W 103 43 24.92
	17234.00	89.42	359.50	9088.66	7893.85	7898.45	829.41	1.18	454189.03	688509.37	N 32 14 49.96	W 103 43 24.93
	17329.00	89.55	359.38	9089.51	7988.84	7993.44	828.48	0.19	454284.02	688508.44	N 32 14 50.90	W 103 43 24.93
	17519.00	89.52	0.28	9091.06	8178.83	8183.43	827.92	0.47	454474.00	688507.87	N 32 14 52.78	W 103 43 24.93
	17709.00	89.66	359.39	9092.42	8368.82	8373.42	827.37	0.47	454663.98	688507.33	N 32 14 54.66	W 103 43 24.92
	17900.00	89.35	358.44	9094.07	8559.80	8564.38	823.75	0.52	454854.93	688503.71	N 32 14 56.55	W 103 43 24.95
	18089.00	89.41	359.97	9096.11	8748.77	8753.35	821.13	0.81	455043.88	688501.09	N 32 14 58.42	W 103 43 24.97
	18279.00	89.52	0.33	9097.88	8938.76	8943.34	821.63	0.20	455233.87	688501.59	N 32 15 0.30	W 103 43 24.95
	18469.00	90.72	359.43	9097.49	9128.75	9133.33	821.23	0.79	455423.85	688501.19	N 32 15 2.18	W 103 43 24.94
	18565.00	90.58	359.43	9096.40	9224.75	9229.32	820.28	0.15	455519.83	688500.23	N 32 15 3.13	W 103 43 24.95
	18661.00	89.83	359.51	9096.05	9320.74	9325.31	819.39	0.79	455615.82	688499.35	N 32 15 4.08	W 103 43 24.95
	18852.00	90.41	359.54	9095.65	9511.74	9516.31	817.80	0.30	455806.81	688497.76	N 32 15 5.97	W 103 43 24.96
	19043.00	90.24	0.69	9094.57	9702.73	9707.30	818.19	0.61	455997.79	688498.15	N 32 15 7.86	W 103 43 24.94
	19138.00	90.52	359.36	9093.94	9797.72	9802.29	818.23	1.43	456092.78	688498.19	N 32 15 8.80	W 103 43 24.93
	19233.00	90.45	359.27	9093.14	9892.72	9897.28	817.09	0.12	456187.76	688497.05	N 32 15 9.74	W 103 43 24.94
	19329.00	90.76	359.23	9092.12	9988.71	9993.27	815.84	0.33	456283.75	688495.79	N 32 15 10.69	W 103 43 24.95
	19424.00	91.62	358.51	9090.15	10083.68	10088.23	813.96	1.18	456378.70	688493.92	N 32 15 11.63	W 103 43 24.96
Toe HL Cross	19438.00	91.39	358.41	9089.78	10097.67	10102.22	813.59	1.81	456392.69	688493.55	N 32 15 11.77	W 103 43 24.97
Last SLB MWD Survey	19474.00	90.79	358.15	9089.10	10133.65	10138.20	812.51	1.81	456428.66	688492.46	N 32 15 12.12	W 103 43 24.98
Projection to Bit	19513.00	90.79	358.15	9088.56	10172.63	10177.17	811.25	0.00	456467.64	688491.21	N 32 15 12.51	W 103 43 24.99

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	A001Ma_MWD-Depth Only	SND 12 01 FED 003 1H / Chevron SND 12 01 FED 003 1H
	1	28.000	28.000	Act Stns	30.000	30.000	A001Ma_MWD-Depth Only	SND 12 01 FED 003 1H / Chevron SND 12 01 FED 003 1H
	1	28.000	821.900	Act Stns	30.000	30.000	A001Ma_MWD	SND 12 01 FED 003 1H / Chevron SND 12 01 FED 003 1H
	1	821.900	8525.000	Act Stns	30.000	30.000	B001Mb_MWD+HRGM	SND 12 01 FED 003 1H / Chevron SND 12 01 FED 003 1H
	1	8525.000	11028.000	Act Stns	30.000	30.000	B002Mb_MWD+HRGM+AX	SND 12 01 FED 003 1H / Chevron SND 12 01 FED 003 1H
	1	11028.000	19513.000	Act Stns	30.000	30.000	B001Mb_MWD+HRGM	SND 12 01 FED 003 1H / Chevron SND 12 01 FED 003 1H